

VISION ZERO MADISON



ACTION PLAN
2020 - 2030



Vision Zero Madison aims to eliminate all fatalities and severe injuries that occur as the result of traffic collisions on city streets by 2035. Until this point, transportation systems have focused disproportionately on moving vehicles as efficiently as possible. Consequently, this action plan represents a shift towards the prioritization of safe, healthy and equitable mobility for all roadway users.

This action plan outlines strategies and actions that should be taken within the next nine years, yet it must not be considered unchangeable. It is a dynamic, living document that is designed to address the needs of a city in flux. The recommendations it contains are meant to be a starting point, not a final all-encompassing list. The plan will respond to data trends and continue to incorporate safety innovations and opportunities to eliminate traffic fatalities and injuries as time passes.




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LETTER FROM MAYOR

All people - no matter their age, ability or background - deserve to be safe while traveling on our City streets.

I am pleased to present the City of Madison's Vision Zero plan to eliminate all traffic fatalities and serious injuries by 2035. This goal is ambitious – but no fatality or serious injury is acceptable on our streets. We are committed to doing the work needed to realize this vision.

In 2020, the Madison Common Council adopted Madison's Vision Zero goal and the Council and I tasked staff with developing this Action Plan. Our internal Vision Zero Steering Team, a multi-disciplinary Stakeholder Task Force, and community members have collaborated over the last two years to develop this Plan, which contains the strategies and actions needed to get us to zero.

Data, smart street design, equity, and engagement are at the forefront of this Plan. We must make changes to our policies and focus our resources based on data. We must slow vehicle speeds and make crossing the street safe and easy. People need to have efficient and affordable options other than driving. Most importantly, our work must be centered on equity as we choose projects, update policies and engage with the community. People of color are disproportionately impacted by traffic crashes. This reality is absolutely unacceptable and must not continue.

Vision Zero is the right goal. Everyone, regardless of their background, ability or age deserves a safe city to live in and travel around. We are dedicated to making this possible. Our mission is a data-driven approach but most importantly, it is a community movement.

Together, we can prevent serious and fatal crashes in the City of Madison.

Mayor Satya Rhodes-Conway

This Action Plan is dedicated to those that
have lost their lives on Madison streets.
Even one death is too many.



Photo by Kristin Brodowsky

WHY VISION ZERO

What is Vision Zero?

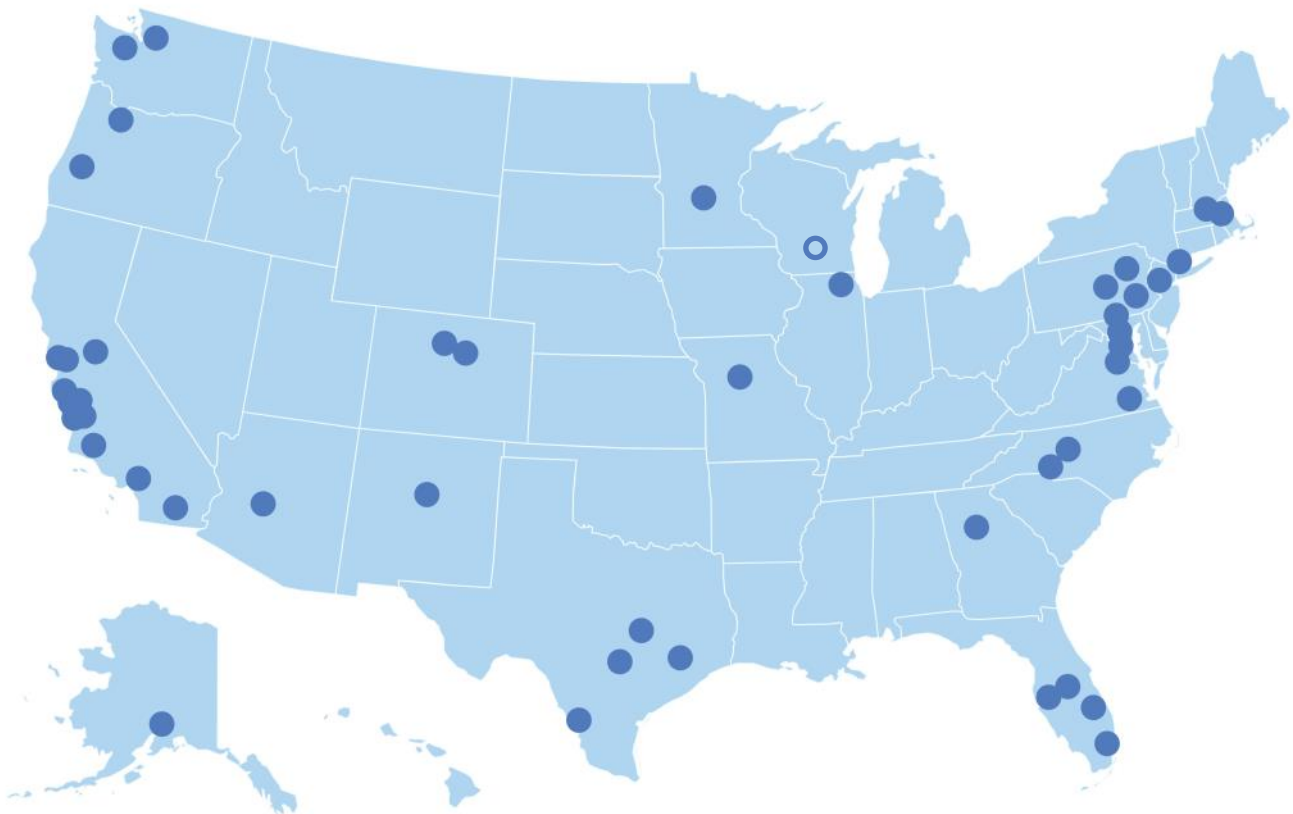
Vision Zero Madison is an initiative with the goal of reducing all traffic deaths and severe injuries on city streets to zero by 2035. It represents a fundamental transformation in the city's approach to traffic safety in its prioritization of human life over the movement of motor vehicles.

Developed in Sweden in the 1990s, Vision Zero began as a national transportation policy centered on the assertion that nobody should be killed or seriously injured as the consequence of traffic collisions. The campaign has since become a growing

movement. According to the Vision Zero Network, more than 40 cities in the United States have committed to the goal of zero traffic deaths and life-altering injuries by developing action plans and implementing community-specific strategies that address each transportation system's unique circumstances.

If Madison succeeds in meeting the required criteria, it would become one of the first cities in the Midwest and the first city in Wisconsin to be a part of the network.

THE VISION ZERO NETWORK





Zero is Possible:

In 2019, 17 years after adopting Vision Zero, Oslo, Norway, had no pedestrian or bicyclist fatalities on City streets.

The Vision Zero Approach to Traffic Safety...

...Recognizes that deaths are preventable.

Traditionally, traffic deaths have been understood as unavoidable. The incalculable value of human life, however, means that no amount of fatalities or severe injuries is ethically acceptable. Instead, we must begin thinking about traffic deaths and the life-altering injuries that can occur as the result of collisions as preventable. This means that we must re-conceptualize the role that government should play in safety by recognizing that it has the agency to produce safe conditions, systems and behavior.

...Moves away from individual responsibility and integrates human failure.

Vision Zero requires us to rethink who should be blamed in the case of a traffic collision. Normally, individual road users are seen as the problem-- bad drivers, careless bicyclists, and distracted walkers are considered the cause of crashes.

As a result, solutions have typically focused on the level of the individual and tried to cultivate perfect human behavior. Driver's tests are expanded to include new questions, social media campaigns warn of the dangers of using your phone while driving or walking, and signs placed alongside highways ask drivers to buckle up.

Vision Zero, on the other hand, recognizes that humans will never be perfect. Instead of influencing individual behavior directly, it aims to shape policies, systems, and the built environment to encourage the desired behavioral choices. It is the responsibility of system designers to recognize the predictable errors that drivers make and adapt accordingly. By changing the transportation system instead of blaming human error, Vision Zero makes the right choices intuitive, rational, and easy for everyone.

...Focuses on severe crashes.

While an ideal world would not have any collisions in it, it is not realistic to attempt to prevent all car crashes. Instead, Vision Zero focuses on reducing the severity of collisions. We can't stop people from making mistakes, but we can stop those mistakes

Why Vision Zero- 5

from having catastrophic consequences. This human-centered approach allows Vision Zero to prioritize life-saving strategies over those that address crashes in general.

...Is driven by data.

Vision Zero's prioritization of data helps make its approach efficient and effective. It considers demographic information, vulnerable communities, and geographic disparities in addition to the data that is normally collected in police and public health reports. By more thoroughly analyzing where and how crashes happen, we can focus on implementing the actions that will be the most beneficial to the Madison community.

...Emphasizes community engagement and social equity.

Two other core elements of Vision Zero are community engagement and social equity. As all individuals have the right to move safely through their communities, public participation in transportation decision-making is vital. Cities should help generate collective action around the need for safer streets and give residents the space to express their concerns and desires.

All people deserve to be safe while traveling through cities, whether walking, bicycling, driving or taking transit, and regardless of age, race, ability, or background. Traffic collisions disproportionately impact vulnerable communities like people of color, individuals with lower incomes, seniors, children, and people with disabilities. Vision Zero addresses these inequities by prioritizing interventions in areas most in need of safety improvements and incorporating vulnerable populations into the decision-making process.

...Works to limit the role of traffic enforcement in safety.

Traditional approaches to traffic safety often focus on the individual, and it is easy for transportation systems to create policies that rely on enforcement for implementation as a result. Doing so, however,

ignores the of the disparate impacts that can come from entwining safety and enforcement for people of color, people with low incomes and other marginalized communities.

In the short term, Vision Zero will continue to identify contributors to desperate impacts and through transparency and collaboration continue to identify causative influences on these disparities and actively seek solutions to reduce or eliminate them. In the long term, Vision Zero strategies should be achieved through road design decisions and the creation of a self-enforcing culture of safe driving.

Vision Zero aims to reduce reliance on enforcement. By focusing on hazardous driving behaviors and utilizing data to guide enforcement locations, MPD can have immediate impacts on reducing harm created through historical enforcement efforts.

Working to address disparities in the transportation system and within any enforcement, must be the basis for Vision Zero.

...Uses a systems approach.

Vision Zero is a multi-agency and multi-partner initiative that compels us to consider the road system in its entirety. Representatives from all divisions and departments that can influence the factors involved in traffic injuries and deaths must be involved. Road design, speed, enforcement, driving culture, available technology, and laws all contribute to safe mobility. Engineers, planners, policy-makers, law enforcement, emergency response teams, public health professional, and community leaders are all responsible for the safety of the road system. System-wide change requires cooperation and collaboration across the community.

Traditional Approach	Vision Zero
Traffic deaths are inevitable	Traffic deaths are preventable
Aims to fix humans	Changes systems
Expects perfect human behavior	Integrates human failure
Prevents collisions	Prevents fatal and severe crashes
Exclusively addresses traffic engineering	Considers the road system as a whole
Doesn't consider disproportionate impacts	Regards road safety as an issue of social equity





Why Madison Needs Vision Zero

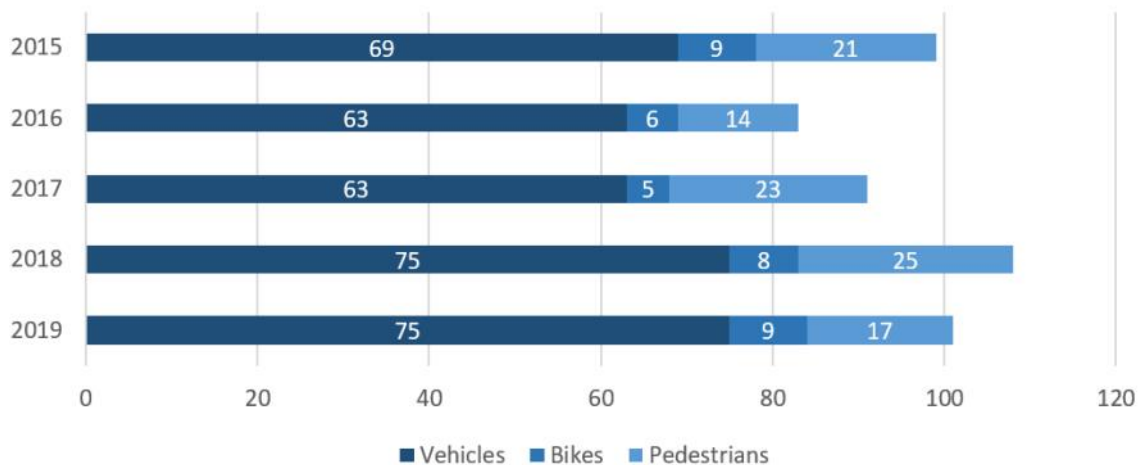
According to Wisconsin’s Department of Transportation, Dane County had one of the state’s highest average number of traffic fatalities from 2015 to 2019, second only to Milwaukee County.

Forty four people died from crashes on Madison streets between 2015 and 2019, and hundreds more were injured. These deaths are not acceptable.

The future of Madison

The City of Madison is projected to gain over 43,000 residents between 2010 and 2040, the biggest numeric increase in the state. This growth of over 18% will bring the City’s population to the largest it has ever been at over 280,000, and some projections predict this number will be even higher.

Madison Fatalities and Severe Injuries



Data from TOPS lab, crashes with a crash severity of K (fatal) or A (incapacitating injury) from 2015 to 2019.

With more people living in the area, the number of vehicles on the road, the number of pedestrians crossing intersections, and the number of bicyclists navigating through the City will all increase, resulting in more opportunities for collisions. In order to prevent the increase in traffic related deaths and injuries that will occur if nothing changes, the City of Madison must take bold and decisive action to make our streets safer.

Multimodal transportation

Madison prides itself on being a city that is accessible to both bicyclists and walkers, and has been awarded both a Platinum Bicycle Friendly Community Designation and a Gold Level Walk Friendly Community Designation. Safety concerns from users, however, limit the number of people walking and

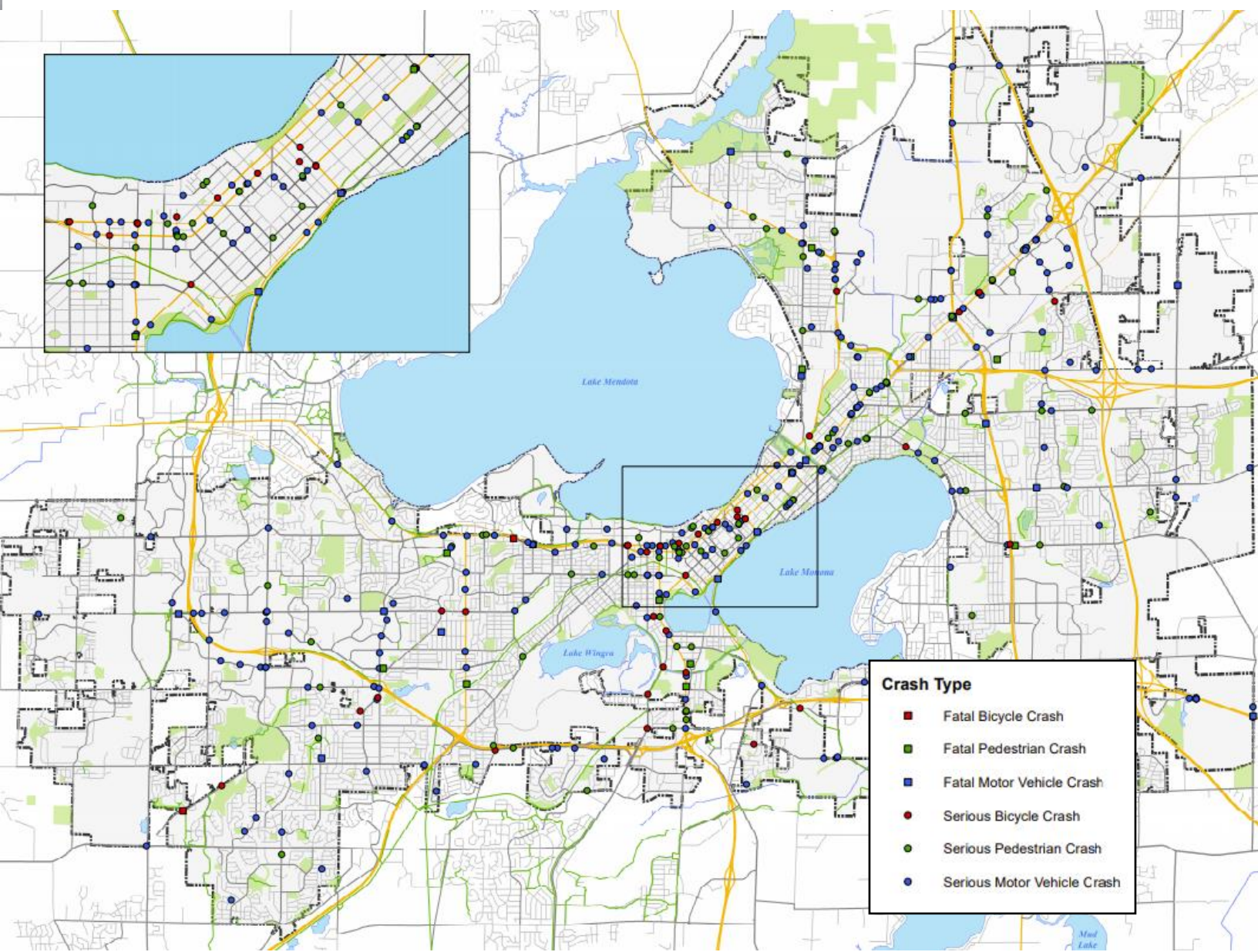
biking. Many bicyclists must use busy streets in order to gain access to their destinations, and pedestrians must cross busy, multi-lane intersections while traveling through the city. Vision Zero can help increase the accessibility of these modes of transportation for all residents by making them safer.

Public health

Traffic injuries and fatalities are a preventable public health problem. Traffic safety and public health concerns are closely connected. Making alternatives to driving like biking and walking more attractive can directly encourage physical activity, limit air pollution, improve quality of life and make a safer, healthier city.

Severe Injuries and Fatalities on Madison Streets from 2015 to 2019

Contains crashes occurring on City of Madison, Dane County, and UW Maintained Streets



Vision Zero in Madison

In July 2020, Mayor Satya Rhodes-Conway announced Madison's vision to eliminate fatal and serious traffic injuries in the City by beginning the development of a Vision Zero Action Plan. Earlier that month, the Common Council unanimously approved a resolution of support, further indicating Madison's commitment to the initiative.

“We must prioritize safety over speed. We must prioritize safety over shaving a few minutes off our commute. We're talking about the deaths of someone's mother or father, someone's child, someone's friend.”

– Mayor Satya Rhodes-Conway



The Vision Zero Action Plan

This action plan contains foundational elements and actionable strategies that will allow Madison to achieve the goal of zero traffic deaths and life-altering injuries. Including central principles in this document allows us to guarantee that the actions we recommend accurately reflect the initiative's core values. Given a strong foundation, it is possible to create specific, measurable, and realistic goals for the city as it seeks to move away from a transportation system built for vehicles to a system that is built for people. This plan represents both a shift in priorities and a city-wide commitment to generate meaningful change.



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Why 2035

Setting a timeline brings urgency to this initiative and helps us hold ourselves accountable. In 2035 the City of Madison will evaluate its progress and develop a new action plan.



Why Zero?

Zero is the only justifiable target for this plan to aim to achieve. Setting it as a shared goal is bold and reinforces that we need major shifts in the way we think about our transportation system.

VISION ZERO GUIDING PRINCIPLES

Prioritizing Safety

Vision Zero Madison aims to lay the groundwork for a new approach to traffic safety by designing City streets for people rather than cars. In the past street design decisions have disproportionately prioritized efficient vehicle movement. Madison has the opportunity to reprioritize the functions we expect from our transportation system to fully eliminate traffic fatalities and injuries. Instead of trying to make it safer for personal vehicles to move faster or reduce travel times, we must focus on safe mobility for all roadway users.

Prioritizing safety includes allocating limited public space, resources, and support to those who need it most, including pedestrians, bicyclists, and those riding public transit. People use Madison's streets for a variety of activities, so we must construct them in a manner that balances the needs of all users. In order to equitably redistribute public space, we must recognize that not all users are alert adults that can see clearly, walk briskly, or react quickly to changes in their environment. Vulnerable users including the young, the elderly, and people with disabilities should be given the highest priority when we begin to think about strategies that can be implemented to make our streets safer.

Pedestrians

Vision Zero Madison commits to providing continuous, unobstructed, and clear paths that are easy and safe to navigate for all pedestrians. The perspective of those walking will play a large role in determining the level of danger still present in facilities. Systems will account for different pedestrian speeds and abilities. When it comes to pedestrian infrastructure, all people walking through Madison's streets would benefit from improvements like shorter crossing distances, refuge medians, wider sidewalks and visible crosswalks.

Bicyclists

Designing safe bicycling infrastructure is integral to this principle of safety. Cohesive, connected networks are necessary to allow cyclists to access all areas of the city. Incorporating the needs of cyclists into intersection design can also help in the creation of complete cycle networks. The city will move towards an all ages and abilities bike network that includes protected bike lanes, separated bike paths, and low speed streets. This will allow people of all ages and confidence levels to have access to a connected network that gets them to jobs, services, and schools.

Transit Users

Transit riders will be taken into consideration as well. Dedicating space for public transportation makes service more convenient and reliable, creating a safe and attractive transportation option. Shifting more trips to transit will improve safety for everyone. As part of the MetroForward initiative, which includes implementation of Bus Rapid Transit, Madison will make substantial improvement to transit service and access.





Considering Tradeoffs

This Vision Zero Action Plan does more than outline strategies that Madison should take within the next decade to reduce severe crashes on city streets. It also acts as a value statement by redefining who and what must be given priority in our transportation system. This explicit assertion of precedence means that we must take into account the tradeoffs associated with such changes.

Each street is unique and must respond to the needs of the people it serves, including pedestrians, bicyclists, and transit users. As a result, it will be necessary to design streets to include sidewalks, protected bike lanes, transit lanes, safe access to transit stops, new crosswalks, median islands, and curb extensions. Public space is limited, however, so neighborhoods implementing these changes might be required to remove parking spaces, narrow travel lanes, or reduce the total amount of lanes designated for cars. While these changes will improve safety there will be impacts on parking and motor vehicle travel times.

The allocation of space is a controversial topic in urban planning, and design decisions often elicit strong reactions. We acknowledge that Vision Zero's prioritization of safety over the efficient movement of vehicles means that drivers may have to wait in traffic for longer periods of time to allow those walking to safely cross busy streets, or spend a few more minutes looking for parking because of an added bicycle lane. These small changes, however, may mean the difference between life and death for people walking, biking and driving. .

The City of Madison's Complete Green Streets Initiative is working to develop decision processes that will be used to determine what actions should be taken in the construction and reconstruction of City streets. Such determinations will consider the specific contexts provided by the communities and neighborhoods the street serves, as well as the safety, comfort, and access of all of its users.

Data Driven

As discussed earlier in this report, Vision Zero relies heavily on data to evaluate which types of strategies should be implemented and where they would be most effective. This approach allows the City to identify trends and uncover issues that can be addressed systematically rather than limiting the scope of analysis to isolated incidents. This forward facing determination of risk factors is proactive rather than reactive, and can prevent crashes before they happen as well as mitigate crash severity. Additionally, it acknowledges the limited resources allocated to traffic safety initiatives by using data to determine where investments in safety are most urgent.

Data Collection

Most of the data used in the creation of this Action Plan was compiled and distributed by the Traffic Operations and Safety (TOPS) Laboratory based at the University of Wisconsin-Madison. The crash database contains complete records of all police reported crashes in the state starting from 1994, including information regarding the location of the crash, the modes of transport involved, and general crash attributes.

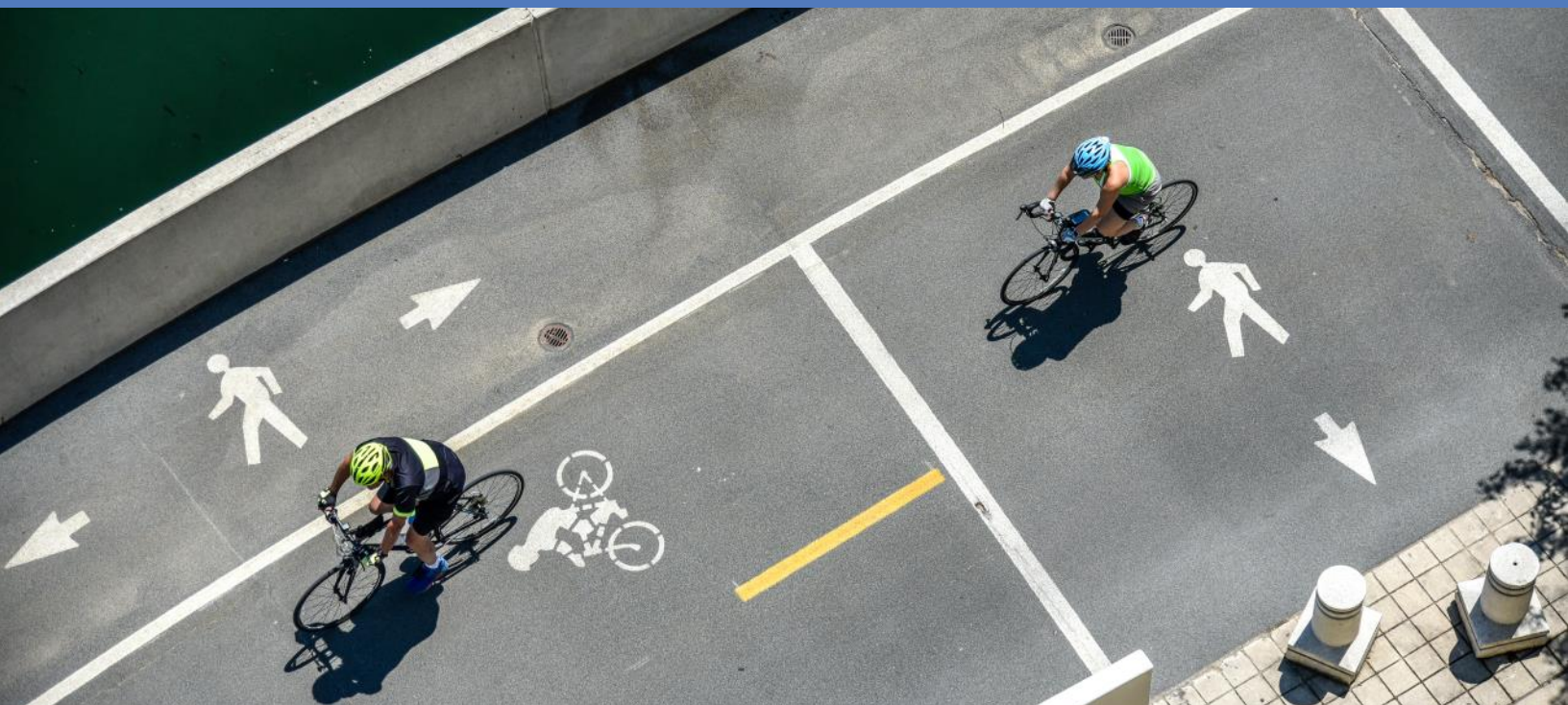
In the future, Vision Zero Madison would like to expand its cooperation with Public Health Madison & Dane County to include data that would consist of more comprehensive information including infor-

mation from crashes that don't involve motor vehicles or are not reportable to the Wisconsin Department of Transportation. This will give a fuller picture of the causes and consequences of crashes in Madison. As members of systemically marginalized communities are less likely to report traffic crashes or be treated adequately when they do so, such a partnership would also allow us to improve our data to more accurately represents the experiences of people of color in the City.

Data Analysis

In the past, the job of analyzing traffic data has been left solely to traffic engineers. Our fight to move beyond traditional understandings of our transportation system, however, compels us to expand the list of those involved in interpreting data to include policy makers, public health officials, police departments, civil rights advocates, and other stakeholders.

Furthermore, it is important to understand that data alone is not all that is necessary for the development of Vision Zero strategies and actions. We must use it as means to identify vulnerable communities and voices that have not yet been heard. Without the context provided by residents of the neighborhoods that we hope to improve, gaps will appear in Vision Zero Madison's proposed strategies and inequities will continue to grow.



Equity

Everyone deserves the right to move through the City safely, but people of color in Madison are more likely to live near a high crash street and less likely to have a complete sidewalk network. Past inequities must be taken into account when we decide where and how Vision Zero projects should be implemented. Equity is integrated into every component of Madison's Vision Zero planning process as a means to repair the harm that has occurred as a result of traditional approaches to traffic safety.

We cannot and should not rewrite history, but we must uncover and reconcile the historical and current injustices experienced by marginalized communities in Madison.

In conjunction with its goal of eliminating all traffic-related fatalities and life-altering injuries, Vision Zero Madison aims to reduce geographic and racial disparities in such collisions. Car crashes disproportionately affect the lives of people of color and those with lower incomes, communities of color are unjustly burdened when it comes to traffic policing, and marginalized neighborhoods also experience more pollution, negative environmental factors, increased public health concerns, lack of economic opportunity, and historic underinvestment.

In response, the City's Let's Talk Streets outreach efforts will focus on communities that have been traditionally underserved. Although online engagement is more accessible to those with limited mobility, full-time jobs, or children, its technology requirements prevent others from participating. In addition to hosting virtual events and encouraging people to take online surveys, some in-person events in communities of color and lower income neighborhoods will be held as public health considerations allow.

Moreover, Vision Zero Madison will prioritize street design safety efforts that fill gaps in infrastructure occurring in neighborhoods where residents have been historically marginalized. Making biking, walking, and public transit more accessible will increase residents' transportation options. Not only must we

respond to the fact that some of our neighborhoods have faced consistent underinvestment, actions taken in these geographic locations will have a bigger impact on overall traffic safety than those taken in other neighborhoods, making them a more responsible use of the City's limited resources.

As we reshape our City's traffic priorities and policies, it is important to keep in mind that they may not be applied equally to all residents. People of color are more likely to be stopped by law enforcement for non-hazardous citations like driving with a suspended license, as discussed later in this report. Increasing overall enforcement therefore can exacerbate existing injustices in our City, sowing distrust and contributing to systemic racism.

We cannot merely enforce our way to zero traffic deaths and severe injuries by relying on threats of fines and jail time to make members of our communities obey the law.

Instead, the City will focus on designing roadways and cultivating a driving culture that puts safety over speed. In the short term, the City will implement enforcement policies that do not disproportionately target people of color and focus on hazardous behaviors that will make an impact on safety. Data related to traffic enforcement will consistently be collected and analyzed by race to ensure that disparities are being eliminated.





Engagement

Input from the community plays a foundational role in the development of the Action Plan. To make streets safer for everyone, community members knowledge of the City helps build a base of knowledge that is not always readily apparent through other available data.

Community members are experts on moving through City streets and safety concerns in their neighborhoods.

Crash data only tells part of the story. Engaging with the community is an opportunity to learn about residents lived experience with transportation safety and the realities of mobility in and around Madison. To create successful strategies, it is important to understand more about peoples values and perceptions. Community input can inform data collection, policy development, and design strategies.

However, engagement cannot be meaningful without targeted engagement to historically underrepresented communities, particularly communities of color. This engagement must be prioritized in Vision Zero. It is important that we listen and learn from those whose voices have long gone unheard.

Finally, this feedback must be incorporated into the strategies and actions that this Action Plan recommends. This document must be built upon a foundation provided by the Madison community, and empowering people by involving them in the development process also improves public acceptability and accountability. It is crucial that the efforts reduce crash severity inequities and do not lead to continued inequities. Engagement efforts must build and foster trust to build towards a safer, more equitable future.

DATA

High Injury Network Map

The creation of a High Injury Network (HIN) map is recommended for Vision Zero initiatives to help focus on streets where the likelihood of a serious or fatal crash is most likely to occur.

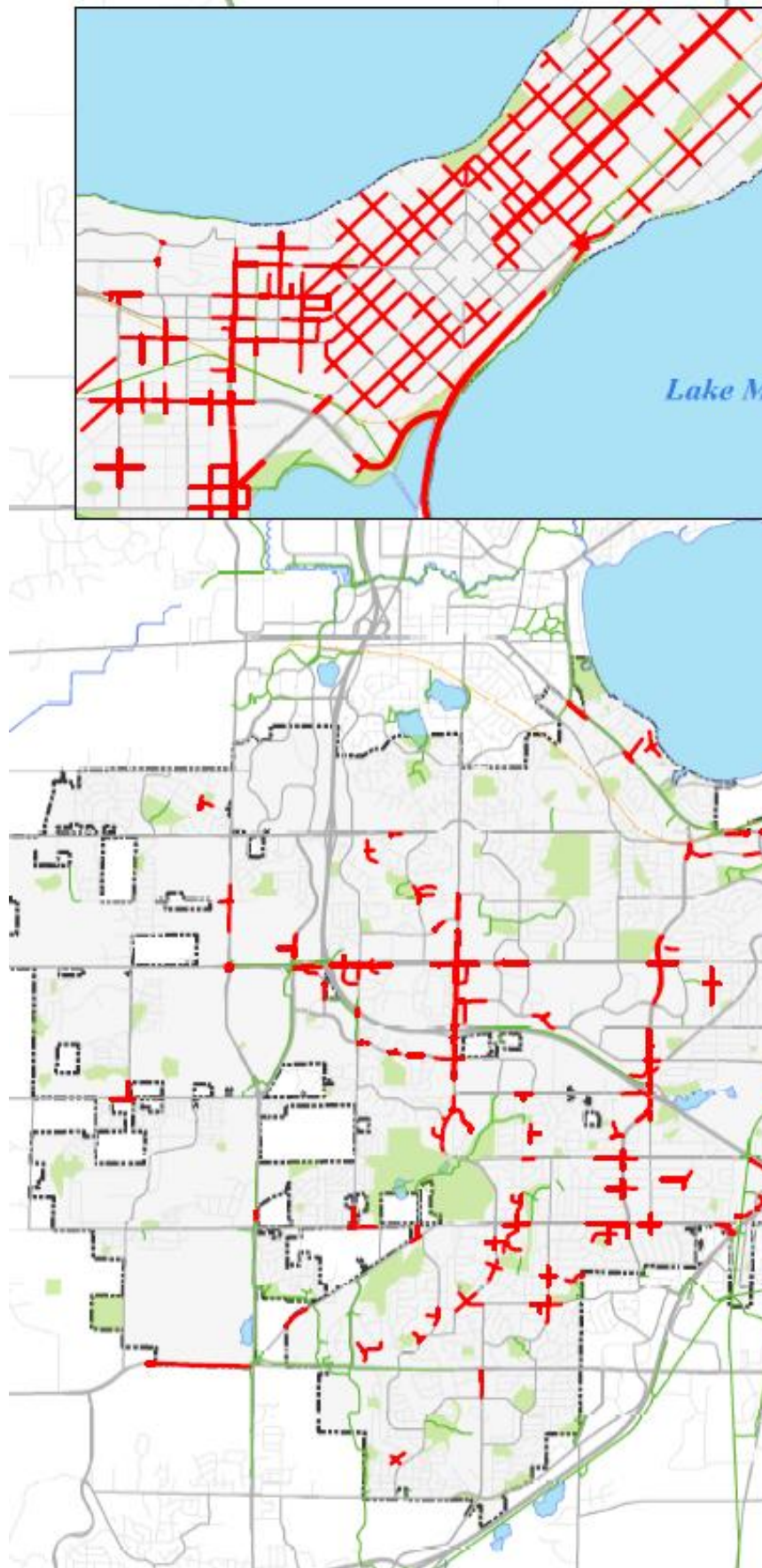
The methodology for the High Injury Network was developed in collaboration with the UW's Traffic Operations and Safety Laboratory.

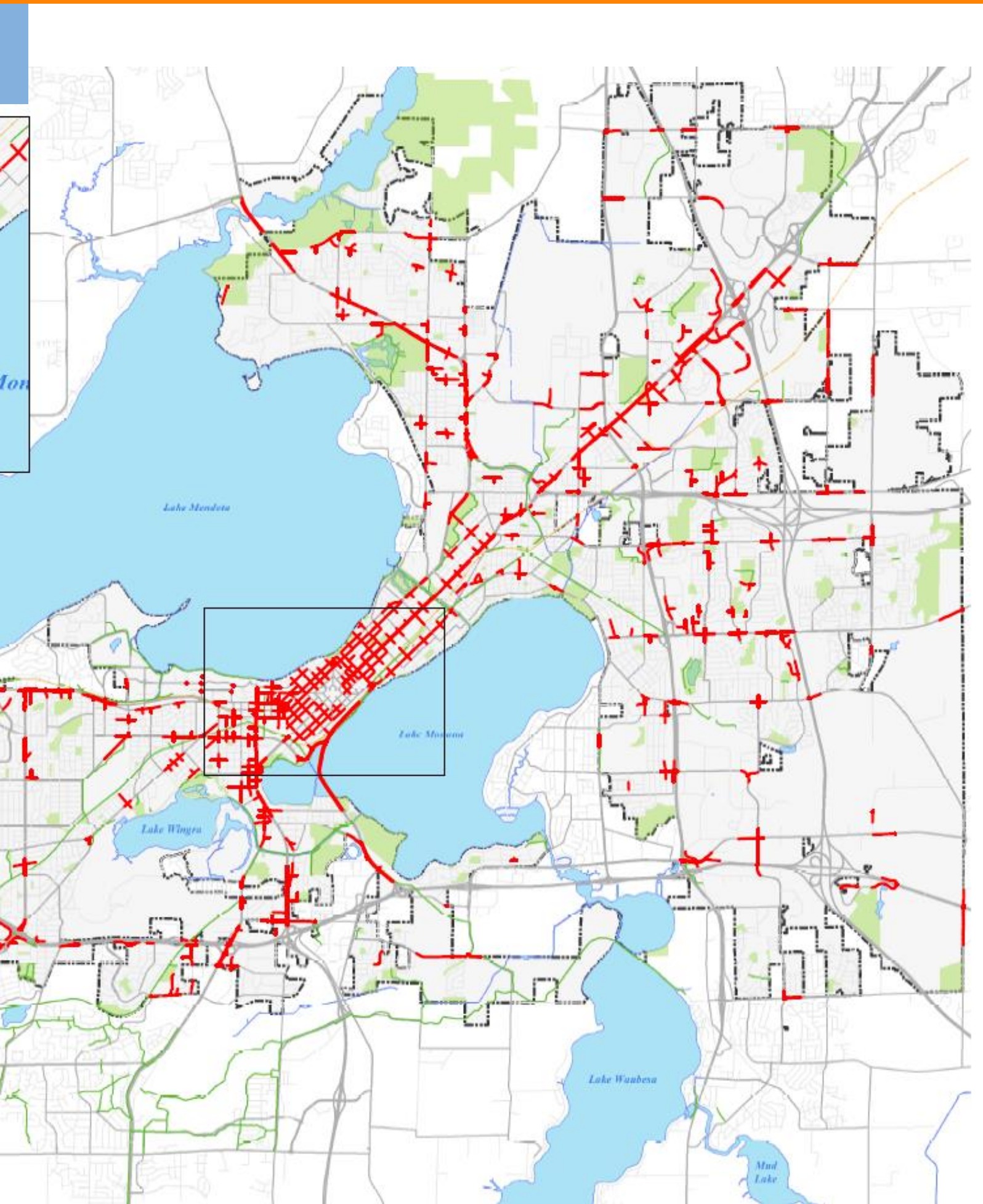
The methodology evaluates crash frequency at intersections and roadway segments to identify high injury facilities in the network. The evaluation also accounts for the societal costs of different types of crashes to provide more weight to fatal and serious injuries.

A total of 4,590 intersections were evaluated with different signal control type and configuration (i.e., stop controlled, traffic signal, roundabout, etc.). A total of 8,855 non-intersection segments were evaluated with different functional class and configuration (i.e., city street, arterial, divided/undivided, etc.). The ones with the highest likelihood of fatal or injury crashes are included on the High Injury Network map. Data used for the current network map is from 2017-2019 and will be updated regularly.

More information on the High Injury Network methodology is available on the City of Madison Vision Zero website.

16% of City streets are at the highest risk for serious and fatal crashes.

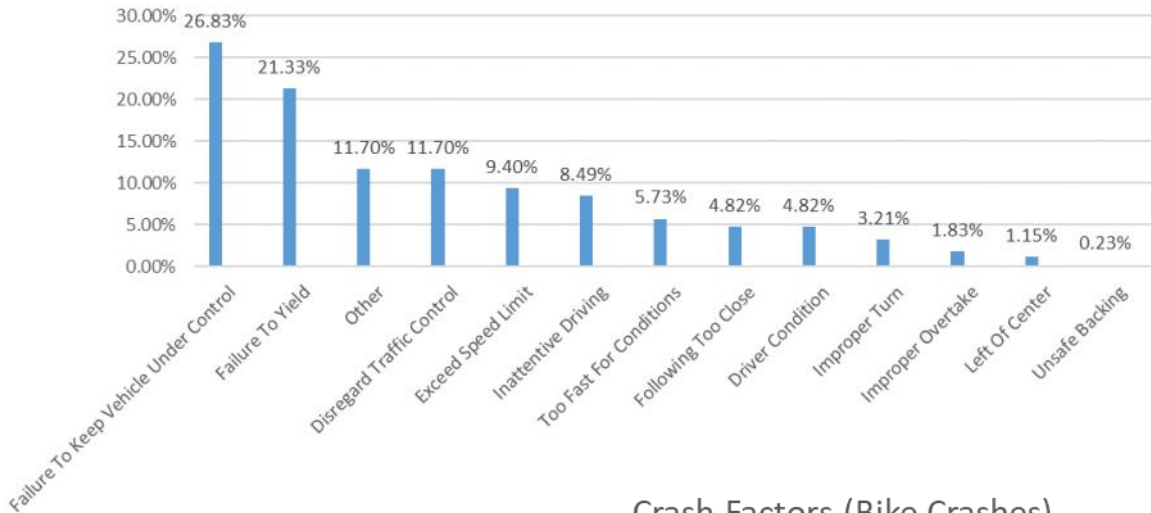




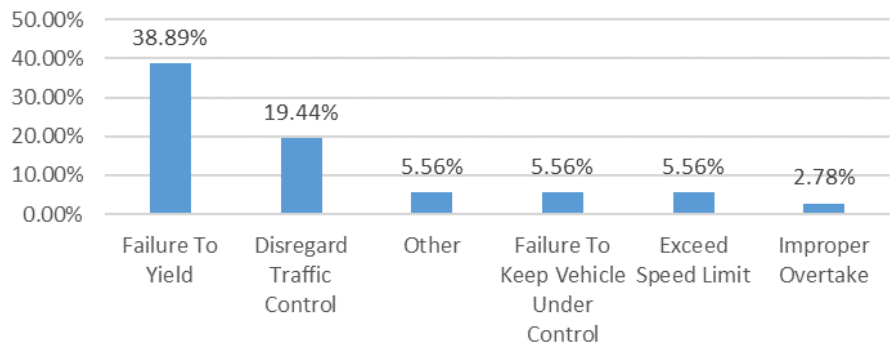
Crash Factors

Preventing crashes that result in life altering injuries and fatalities requires analyzing data to determine which factors increase the severity of such collisions. Data in this section refers to severe and fatal crashes that occurred on any street in the City of Madison, regardless of whether or not it the street segment is under the jurisdiction of the City of Madison.

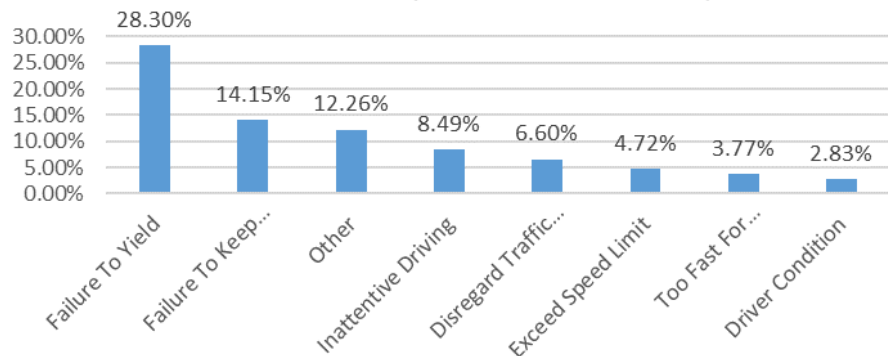
Crash Factors (All Crashes)



Crash Factors (Bike Crashes)



Crash Factors (Pedestrian Crashes)



The factor most commonly identified in the case of severe and fatal crashes is “Failure to Keep Vehicle Under Control.” Better street design can reduce the severity of such crashes through road diets, traffic calming and similar strategies. Additionally, lowering speed limits increases stopping distance, giving drivers more control and reducing the severity of a crash.

The biggest factor in both bicycle and pedestrian crashes is “Failure to Yield.” Street design elements like high visibility crosswalks, improved lighting and rapid flashing beacons can address this trend by providing greater awareness of the crossing—prompting drivers to yield to cyclists and pedestrians, and shifts in driving culture can normalize yielding in areas where it is uncommon.

Crash data: TOPS lab, crashes with a crash severity of K (fatal) or A (incapacitating injury) from 2015 to 2019.

National data for comparison: National Safety Council analysis of National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS) and Crash Report Sampling System (CRSS) data sets.

Speed Kills

Research shows that speed plays a critical role in determining whether someone involved in a collision will survive. Speed is flagged twice as frequently in crashes that resulted in fatal or incapacitating injuries as compared with collisions with no injuries, possible injuries, or non-incapacitating injuries. This means that while speed might not be one of the leading causes of crashes, a vehicle speeding makes in much more likely that a crash will have severe consequences.

On Madison streets, a vehicle speeding increases the chance that a collision will result in death or severe injury by 80%.

When bicycle and pedestrian crashes are considered, speed is flagged 4 to 8 times more frequently in crashes with fatalities and in severe injuries when compared to general crashes with bicycles and pedestrians.

Vision Zero Madison's prioritization of the prevention of severe and fatal crashes over the elimination of all collisions means that more weight will be given to strategies that reduce the severity of crashes than actions that solely aim to reduce the total number of collisions. Controlling the speed at which vehicles travel through City streets is key to our goal of zero traffic deaths and life-changing injuries by 2030.

Controlling Speed is Key

When a person is driving at...



This is their field of vision:



This is their stopping distance:



And pedestrians hit at this speed have a...



13% likelihood of fatality or severe injury



40% likelihood of fatality or severe injury

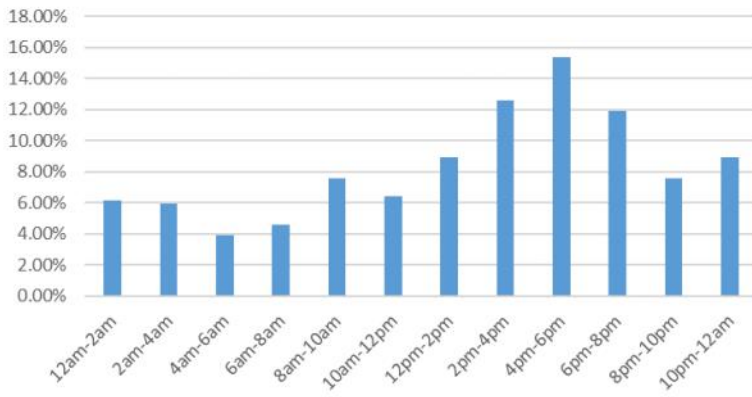


73% likelihood of fatality or severe injury

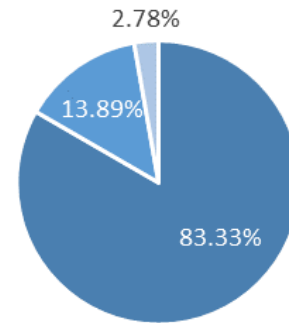
Concept and data:
Toole Design Group, LLC

TOOLE
DESIGN

Time (All Crashes)

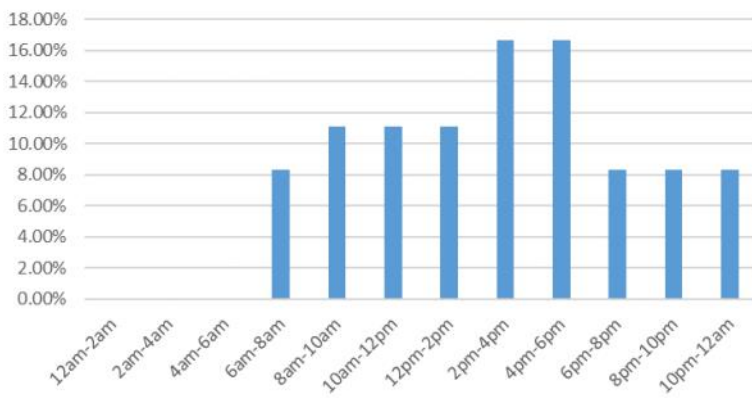


Light Conditions (Bike Crashes)

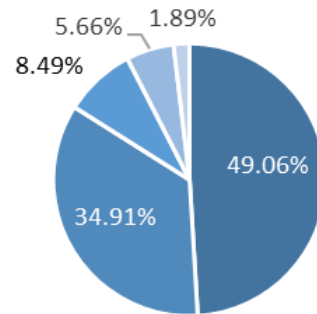


■ Daylight ■ Dark-Lighted ■ Dark-Unlit

Time (Bike Crashes)

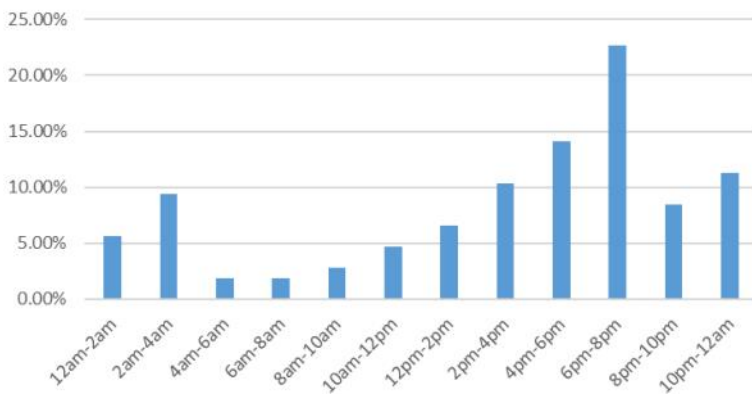


Light Conditions (Pedestrian Crashes)



■ Dark-Lighted ■ Daylight
 ■ Dark-Unlit ■ Dusk
 ■ Dawn

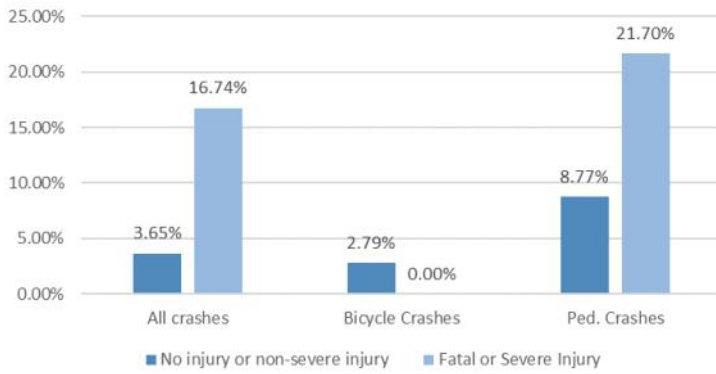
Time (Pedestrian Crashes)



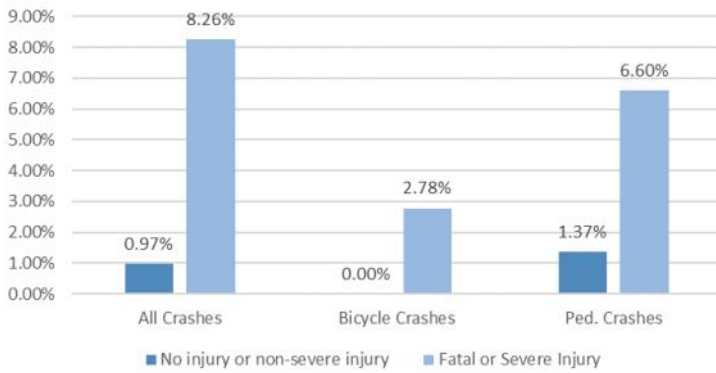
Late afternoon and evening are consistently the most dangerous time periods for drivers, bicyclists, and pedestrians. Such a trend is similar to national statistics and is happening at a time of increased vehicle volumes as commuters return home from work and school.

Severe pedestrian crashes peak slightly later than other types of collisions, reaching their apex between 6:00pm and 8:00pm. Data regarding lighting conditions shows that this may be a consequence of reduced visibility. Unlike bike crashes, which overwhelmingly take place in daylight, 8.49% of pedestrian crashes occur in unlit dark conditions and 49.06% occur in lighted dark conditions. It is important to continue prioritizing LED street lighting upgrades along the High Injury Network, evaluating lighting in areas with high pedestrian crashes, and proactively trimming trees near street lights.

Alcohol Flagged

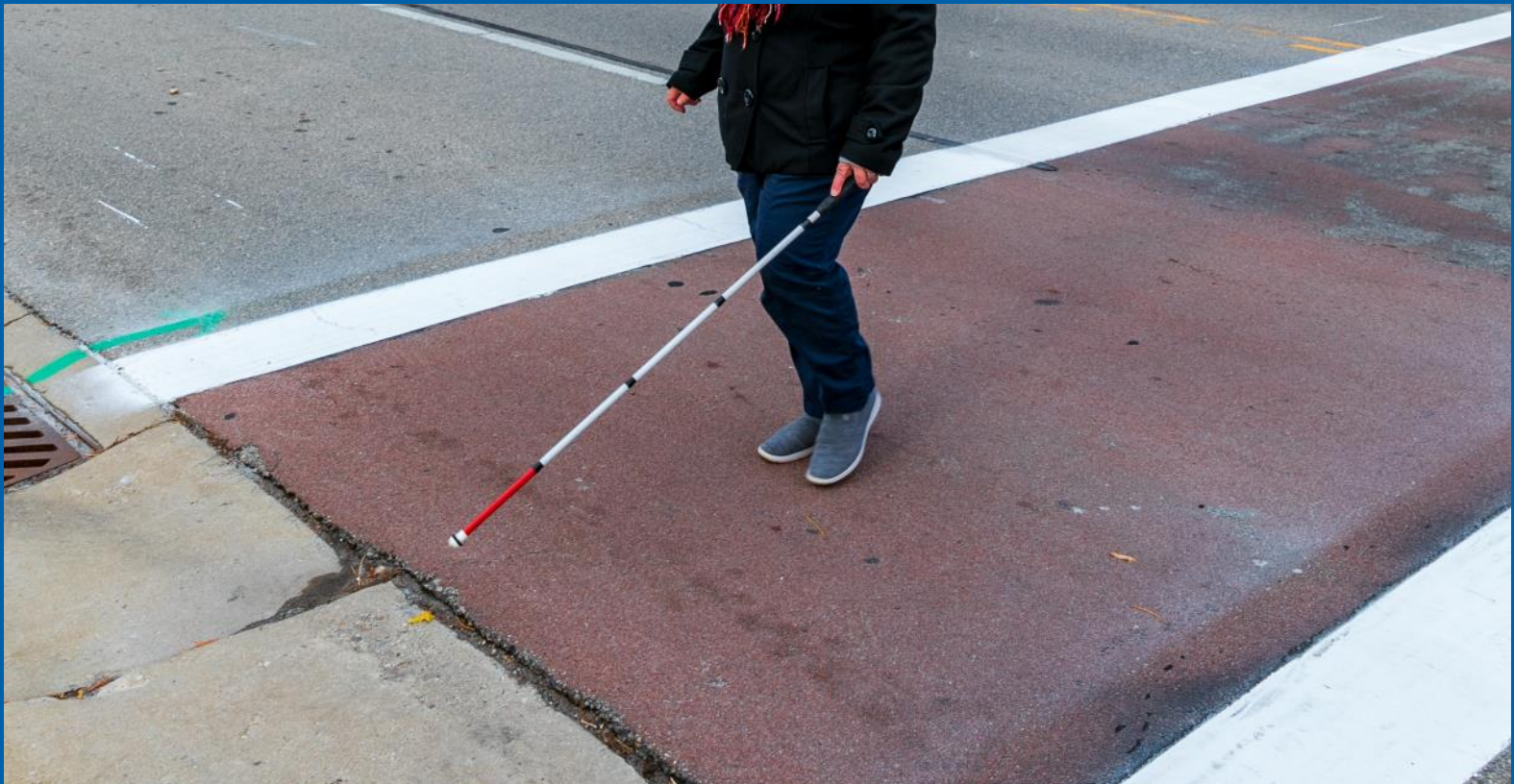


Drug Flagged



Alcohol and drug impairment is a major contributor to fatal and serious injuries on Madison streets. For almost all types of crashes, drugs and alcohol were flagged more often for collisions that resulted in an individual dying or suffering a life-altering injury than other types of crashes.

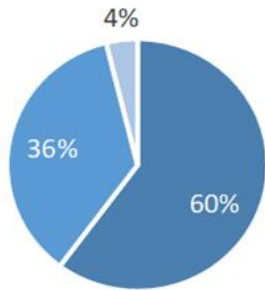
A variety of interventions are needed, including collaboration with programs such as Place of Last Drink and support for court mandated attendance at Victim Impact Panels. Alternatives to impaired driving must also be available that are easy and practical for someone to use to make it easy for people to make the safe choice.



Crash Demographics

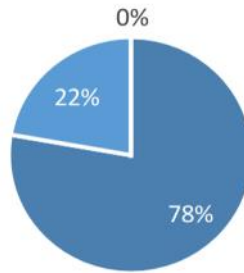
In addition to determining the factors that play a role in a collision's severity, it is also important to identify the common characteristics of individuals involved in such crashes. Data in this section refers to severe and fatal crashes that occurred on any street in the City of Madison, regardless of whether or not it is on a street under the jurisdiction of the City of Madison

Crashes by Gender (All Crashes)



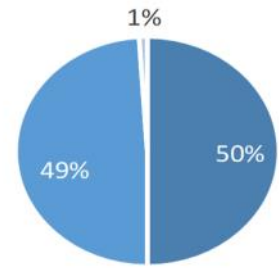
■ Men ■ Women ■ Unknown

Crashes by Gender (Bicycle)



■ Men ■ Women ■ Unknown

Crashes by Gender (Pedestrian)



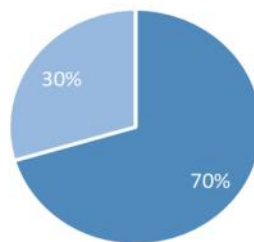
■ Men ■ Women ■ Unknown

Analysis of car crash data reveals that men are more likely to be killed or seriously injured in a collision, and this disparity increases when only bicycle crashes are considered. On the other hand, men and women are almost equally as likely to be killed or experience a life-altering injury when involved in a pedestrian crash.

This contrast between bicycle crashes and pedestrian crashes can be partially explained by differences in different levels of walking and biking by gender.

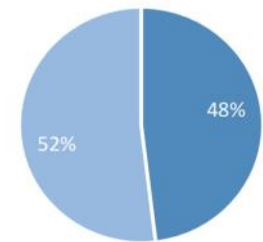
More efforts also need to be taken to increase rates of biking by women. Survey data shows that women living in cities report concerns over distracted driving and speeding.

Percentage of Bike Trips



■ Men ■ Women

Percentage of Walking Trips



■ Men ■ Women

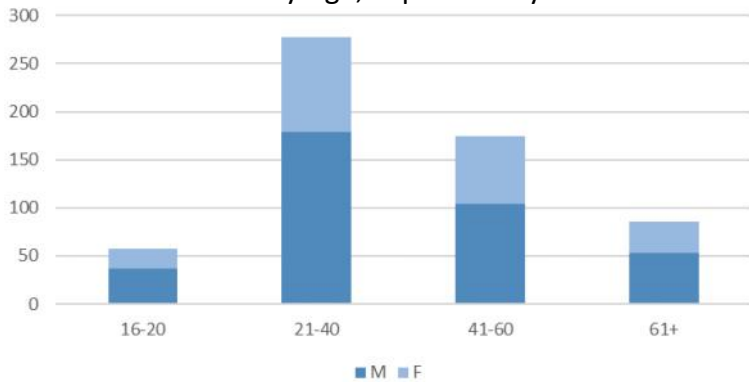
Crash data: TOPS lab, crashes with a crash severity of K (fatal) or A (incapacitating injury) from 2015 to 2019.

Trip data: Ralph Buehler (2017). Analysis of 2017 and 2009 National Household Travel Survey data for the League of American Bicyclists.

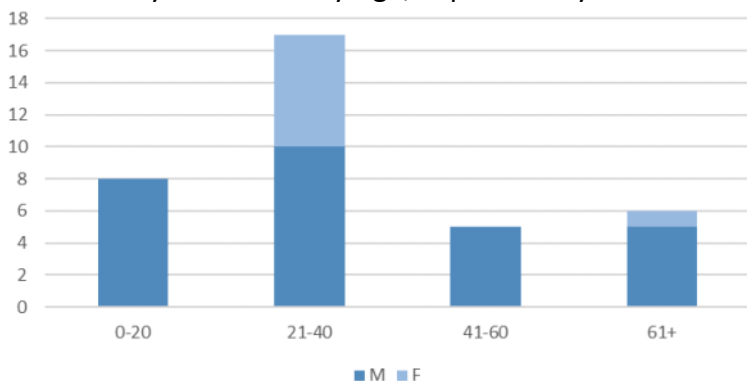
Survey data: Sibley, Anna (2010). Women's Cycling Survey: Analysis of Results. University of North Carolina Greensboro.

Tefft, B.C. (2017). *Rates of Motor Vehicle Crashes, Injuries and Deaths in Relation to Driver Age, United States, 2014-2015* (Research Brief). Washington, D.C.: AAA Foundation for Traffic Safety.

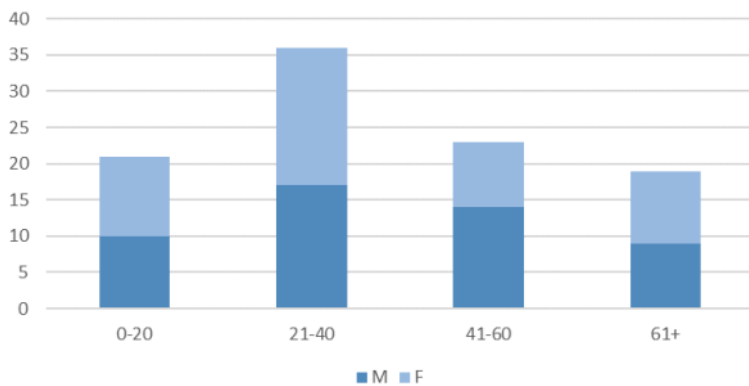
All Crashes by Age, Separated by Gender



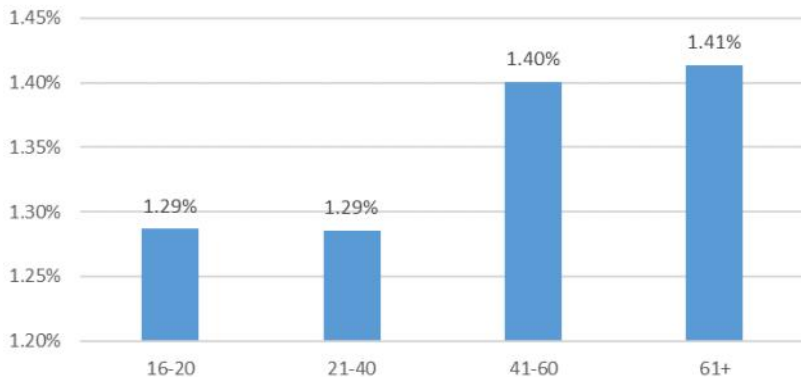
Bicycle Crashes by Age, Separated by Gender



Pedestrian Crashes by Age, Separated by Gender



Percentage of Fatalities/Injuries of Total Crashes Experienced by Age Group



When crashes are disaggregated by age, clear trends emerge that remain when mode of travel and gender are also taken into account. For all crashes, bicycle crashes, and pedestrian crashes, individuals between the ages of 21 and 40 are disproportionately represented.

This data is similar to national trends in car fatalities and indicates that education should be targeted to specific age groups in order to have the largest impact on traffic deaths and life-altering injuries. Furthermore, these trends should be considered in street design. We cannot assume that all drivers, bicyclists, and pedestrians are experienced, alert or ready to react quickly to changes in their environment.



Engagement—Let's Talk Streets



Madison has undertaken a broad engagement project called “Let’s Talk Streets” to gather more information for several ongoing projects including Vision Zero.

The Let’s Talk Streets initiative looks to integrate community voice in the design of the Vision Zero initiative and in considering the design and function of city streets.

The design of the outreach stages tapered from broad to specific, beginning with wide-reaching engagement on broad topics such as community values and ending with refining the details with specific interest groups.

Throughout the engagement process, participant demographics and evaluations were tracked to understand who has been involved in the planning process and identify where greater outreach efforts needed to be applied.

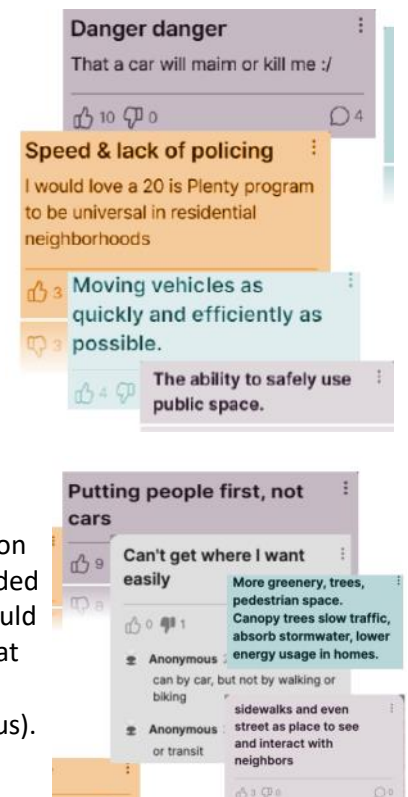
- Stage 1: Raise awareness of the project, invite people to the conversation and assess community values and preferences.
- Pre-Design: The purpose of the pre-design was to gain insight and a sense of the community as a result of COVID-19 and the racial and economic pandemic that was also at play in 2020 and carried into 2021.
- Listening: This listening phase of the engagement was tailored to get the communities input regarding their lived experience using Madison streets. What are their likes and dislikes and what would they change about the streets of Madison?
- Reflecting: Review, clarify, and refine the input received from Phase 1. The work dug deeper into what the values and priorities are around the streets of Madison and ultimately what trade-offs the community would consider based on their lived experiences and expectations for transportation.

Listening

- Overall there were a series of themes that came up as a result of listening to the various small groups over the summer.
- Monroe Street is considered by many to be a people-centered, neighborhood friendly space that supports

businesses while offering a corridor for motor vehicles to pass through. This was shared by the Black, Indigenous and People of Color who attended the JUSTDane engagement.

- Roads are necessary to get to commerce vs. walking or paths (no direct, easy, safe routes).
- Participants in the Darbo and south side neighborhoods are frustrated by the lack of options and convoluted routes to get to nearby locations. They also shared that a lack of consistent or effective ticketing is leading to blind spots at the intersections which is hazardous.
- Residents supported pedestrian overpasses on high traffic streets such as East Washington and Stoughton Rd (dangerous for pedestrians and transit riders).
- Wright Middle School students highlighted safety and traffic when talking about streets they did not like.
- Biking and skateboarding came up as the primary way students from Wright Middle School got around independently. This reflects the importance of paths as a way to easily reach destinations.
- Paths were mentioned as not connecting to commerce as well as not having space that allowed people to stop and enjoy the area.
- People centered vs destination/traffic oriented design was desired.
- Clear communication and education needed on how people should interact especially at intersections (car, bike, pedestrian, bus).



Engagement—Let's Talk Streets

Reflecting

In September 2021, Phase Two of engagement started. This phase included community surveys as well as small group workshops. During Phase Two, the reflecting phase, the goal was to ensure the community agreed with the preliminary values. This phase also was used to gain additional information into themes from Phase One engagement and begin discussing trade-offs and priorities.

This phase included a Community Survey intended to help understand the support for a value based approach to determine shared community values. Respondents reflected the following:

- Putting People First—78% agreed
- Supporting Community—86% agreed
- Fostering Sustainability—87% agreed
- Centering Equity—82% agreed & 11% can live with it

This phase also included focused engagement in collaboration with Luna's Groceries, a corner store in the Allied Drive neighborhood, that is located next to Verona Rd., a high volume and high speed road. The majority of the respondents also agreed with these values. However, there were some people who "could live with it" when it came to the Fostering Sustainability value.

A survey targeting people with disabilities also brought out concern regarding:

- Crossing the street where there isn't a signal
- Using streets without sidewalks
- Dealing with people driving who are inattentive or aggressive
- Dealing with other users on shared-use paths

From the "Reflecting" phase, the following elements were confirmed:

Shared Values

- Majority of the respondents agree that we should prioritize safety, comfort and well-being which de-emphasizes speed and convenience

Priorities

- Increasing safety is most important, even if my travel is slightly slower or less convenient

Speed & Safety

- Most respondents are willing to accept lower speed limits to increase safety.
- However, some respondents were not as willing to accept speed limits of 20 mph or 25 mph

Shared Community Values

The values identified in the Listening phase, and refined in the Reflecting phase should guide decisions related to the design operation, and use of streets and transportation. These are:

- Putting people first
- Supporting community
- Fostering Sustainability
- Centering equity

Engagement Moving Forward

The impact of COVID has disrupted and changed engagement practices. The cycle of in-person engagement has broken and with virtual engagement people tend to review rather than actively participate. Restrictions or comfort level with gathering is also rapidly changing. These new dynamics have impacted the ability to continue to build and sustain relationships. As a result, more work will be needed going forward to rebuild relationships and ensure engagement happens.

More intentional whole person and whole issue engagement must also be done. Engagement must be more cross departmental with consideration of inter-agency projects. Staff must consider broader neighborhood and community concerns that go beyond a one or two block area or just the impacts of one single project. Leveraging engagement across projects will help people lean in rather than away due to engagement fatigue. Vision Zero must be considered as a part of a larger effort to improve not just traffic safety but will be a part of furthering the City's broader equity goals.

Disproportionate Impact Analysis

The City of Madison has established racial equity and social justice as a core principle in all decisions, policies and functions. This includes Vision Zero.

Madison is known for its commitment to livability and sustainability, yet not all people, families and neighborhoods share in this experience. Local data show that people of color, people with disabilities and people from low-income backgrounds fare far worse than many other residents in areas like educational attainment, income, health outcomes and housing affordability and quality.

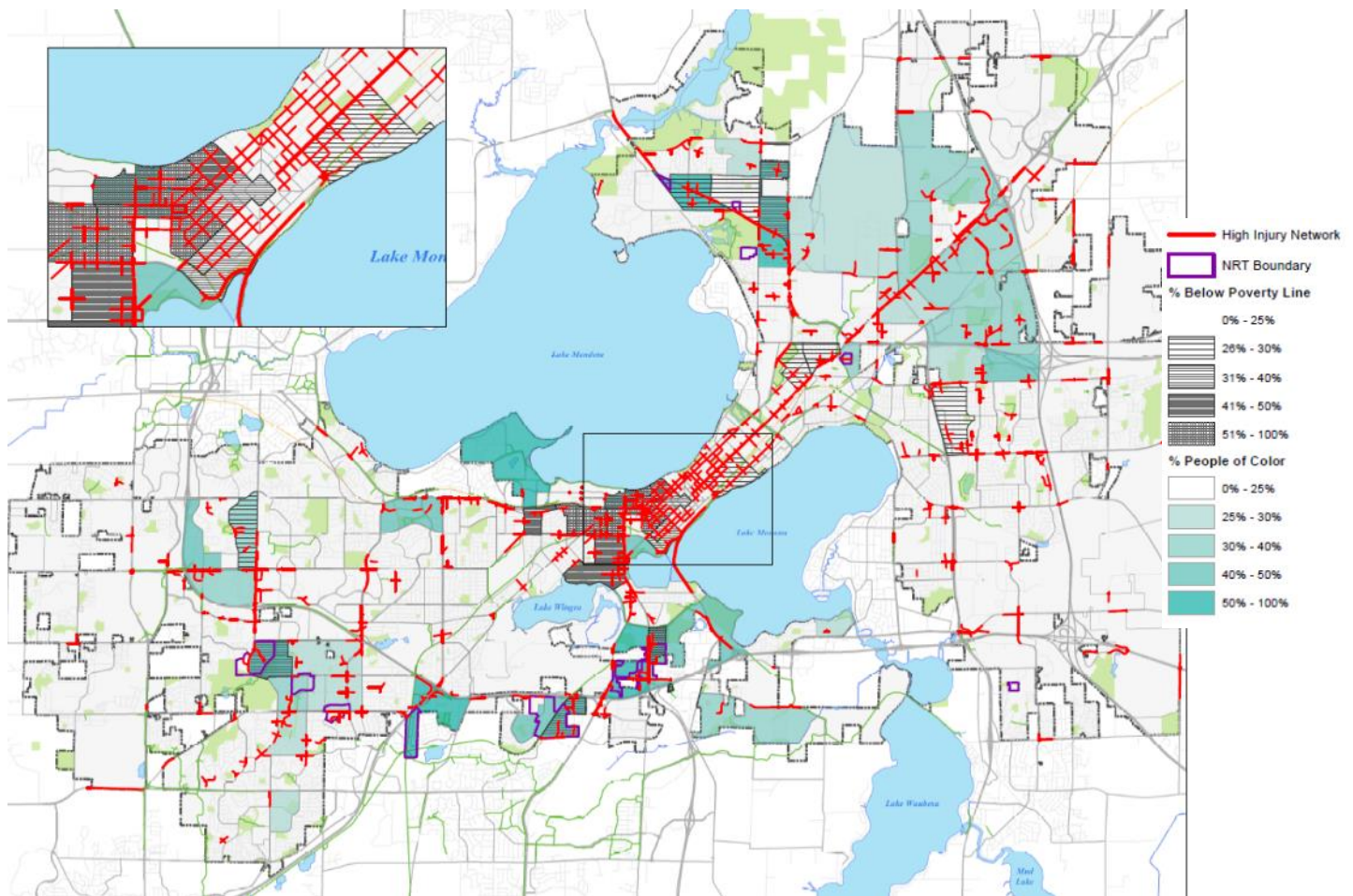
Data and experience reveal that low-income communities and communities of color carry a disproportionate burden of traffic-related injuries and fatali-

ties. This is not arbitrary; it reflects patterns of historic under-investment and racial bias towards some communities. Just over 3% of High Injury Network streets are within a Neighborhood Resource Team area.

Safe Streets Madison

In 2022, the Vision Zero funding will be combined with the funds from the Pedestrian Bicycle Enhancement program and the Neighborhood Traffic Management Program to create the new Safe Streets Madison program. This program will focus on the high injury network and completing gaps in the pedestrian and bicycle networks. Further, funds will be prioritized in a way that equitably distributes resources based on the program's safety and connectivity priorities.

The High Injury Network, Areas of High Poverty, & Communities of Color



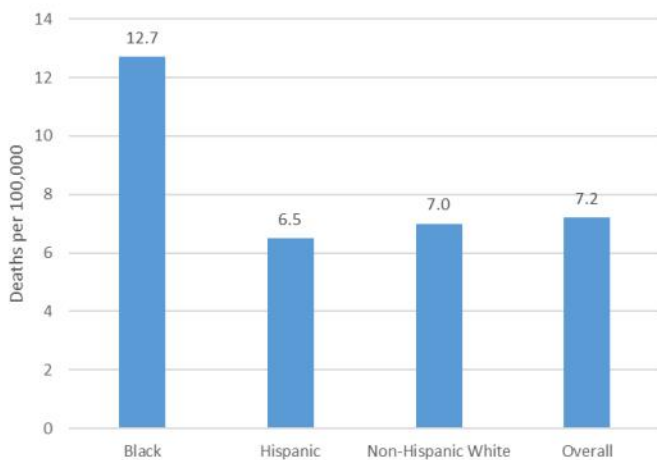
Disparities in Transportation Injuries and Fatalities

With an eye for putting equity at the forefront, the Vision Zero Action Plan strives to improve the safety for the most vulnerable users of the most dangerous parts of the transportation network as well as improve the well-being of everyone traveling on streets and paths within the city. The plan highlights the disproportionate levels of traffic injuries and fatalities on people of color to ensure that steps that can be taken to reduce and eliminate those inequities.

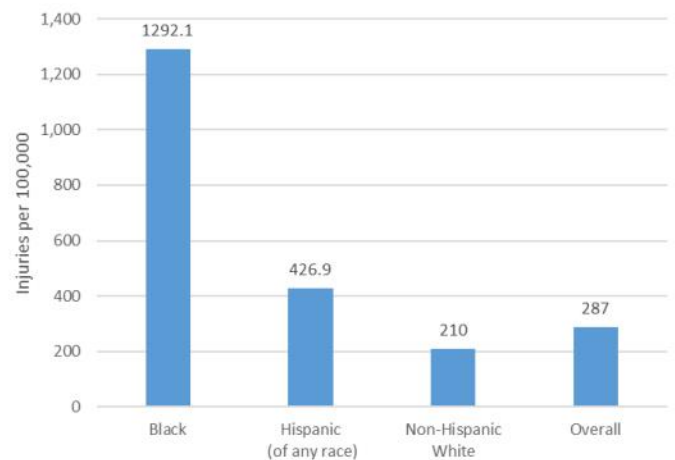
Data from the Wisconsin Department of Health Services shows that there are significant racial and ethnic disparities in both the rates of injury and death across all forms of transportation. In fact, the rate of fatalities for black residents in motor vehicle accidents is nearly twice that of all general population and the motor vehicle and pedestrian injury rates are more than four times higher. Hispanic injury rates, while lower, were still significantly higher than the general population for both motor vehicle crashes and cyclist crashes.

This data confirms concerns shared during the Let's Talk Streets engagement that has occurred, with residents reporting that the streets do not feel safe. Survey respondents particularly mentioned not feeling safe while walking. In addition, people of color were 3x more likely to report "it is never easy to get around."

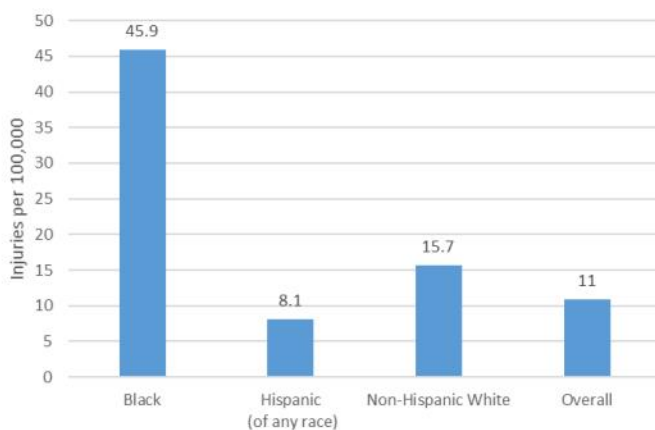
Death Rate due Vehicular Collisions by Race/Ethnicity, Dane County



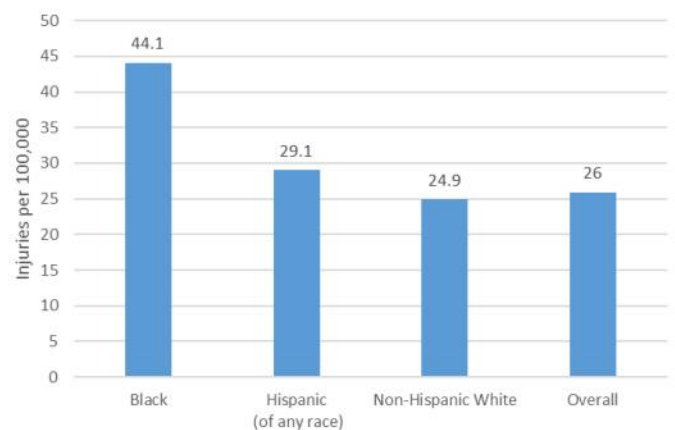
Vehicle Occupant Injury Rate due to Vehicular Collisions by Race/Ethnicity, Dane County



Pedestrian Injury Rate to Vehicular Collisions by Race/Ethnicity, Dane County



Cyclist Injuries due to Vehicular Collisions by Race/Ethnicity, Dane County



Disparities in Traffic Enforcement Citations

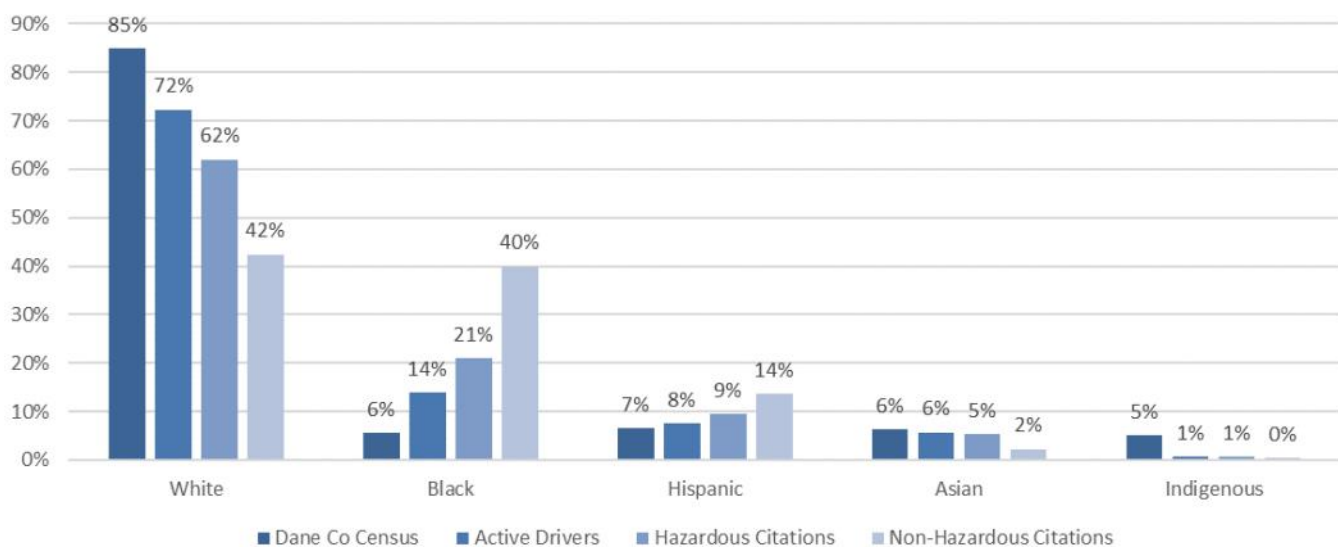
Racial disparities in traffic enforcement are a national narrative and not unique to Madison. However, within the lens of Vision Zero, there is opportunity to attempt to identify some of these disparities and seek a path to eliminate them within our community. One method for better understanding disparities is by examining the citation rates by race and ethnicity and normalizing by “Active Drivers.” The chart below shows the rates of issuance of hazardous and non-hazardous citations compared to the US Census’ racial composition of the county and the Madison Police Department (MPD) derived “active driver” composition.

Hazardous citations include a number of traffic violations such as speeding, operating under the influence, red signal violations, following too closely, failing to make passing or turning movements safely, inattentive driving, failure to yield right-of-way, deviating from traffic lanes, reckless driving, and stop sign violations. Non-hazardous citations include traffic violations such as invalid drivers license, invalid vehicle registration, hit and run, and vehicle equipment failures (such as broken lights).

The concept of “active drivers” was developed in a study completed by the University of South Carolina – Columbia titled “Toward a Better Benchmark: Assessing the Utility of Not-at-Fault Traffic Crash Data in Racial Profiling Research.” The study examines the differences between census-based demographic data and the percentages amongst “active drivers”, or drivers that are on the road and subject to enforcement, and provides a blueprint to calculate this difference.

According to traffic citation records, black drivers receive 1.5 times more hazardous driving citations than would be anticipated based on the percentage of active drivers. Conversely, white drivers receive approximately 15% fewer hazardous driving citations relative to the percentage of active drivers. Rates among all other racial and ethnic groups are roughly approximate to anticipated rates. Further, black and Hispanic drivers receive significantly more non-hazardous citations than would be anticipated while white and Asian drivers receive significantly fewer citations than would be anticipated.

Citation Rates by Race and Ethnicity



STRATEGIES AND ACTIONS

Introduction:

Achieving Zero Deaths and Injuries will require a safe systems approach that addresses factors that lead to deaths. Madison's uses the following factors in a safe systems approach:

Safe Streets – Factors that lead to fatalities and injuries include the geometry and speed of our streets. Motor vehicle drivers travel fast on streets that feel fast – and speed has a large correlation with crash severity. Altering the layout and geometry of a street can help lower travel speeds and reduce conflicts.

Safe People – Encouraging safe behavior for Motor Vehicle drivers, cyclists, and pedestrians is an important part of Vision Zero. In Madison over half of crashes had driver behavior as a contributing factor.

Safe Vehicles – Properly operating vehicles with safety equipment can significantly decrease the severity of crashes. For example, the National Highway Traffic Safety Council estimates that the combination of an airbag plus a lap and shoulder belt reduces the risk of death in frontal crashes by over 60 percent.

Safety Data – Safety Data gives us the tools to understand where injuries and deaths are occurring and what factors are causing the crashes. We can't address a problem until we understand it, and we achieve what we measure. Vision Zero is a data driven process that will direct resources and attention to where we have the greatest opportunity to make a difference.

Safety Focused Enforcement – The City is growing in the understanding of the role enforcement plays in safety. Traditionally, enforcement across the country has had a disproportionate impact on low-income and communities of col-

or, with modest increases in compliance. Madison seeks to address recklessness that leads to deaths, without profiling or creating disproportionate impacts to members of our community.

Overview of Strategies:

With each factor in the safe system approach, there are corresponding strategies that are actionable. The following bullets summarize the strategies, while the tables that follow provide more detail on the actions.

Safe Streets

1. Create safer streets through speed reductions
2. Make safety improvements systematically on High Injury Network Streets
3. Close gaps in the pedestrian and bicycle network
4. Improve street lighting to increase visibility regardless of transportation mode
5. Incorporate Vision Zero into project selection
6. Secure increased funding for implementing Vision Zero strategies & for long-term maintenance of improvements
7. Advocate for changes to state statutes and increased funding that would improve the City's ability to advance the goals of Vision Zero

Safe People

1. Expand and support alternatives to driving, decreasing motor vehicle miles traveled (VMT)
2. Build a traffic safety culture in Madison
3. Expand safe routes programming and walk/bike/travel education
4. Develop materials to educate and communicate to city staff and key stakeholders

Overview of Strategies, Continued

Safe Vehicles

1. Encourage and promote vehicle safety technologies when purchasing vehicles
2. Train drivers to make the best decisions available to them using defensive driving strategies

Safety Data

1. Improve City data, transparency, and communication
2. Use data to equitably direct funding and resources

Safety Focused Enforcement

1. Coordinate engineering, education, and enforcement activities so that MPD can focus traffic enforcement to times and locations with the greatest impact on unsafe driving and serious crashes

2. Limit use of pretextual traffic stops¹ and implement clear guidance on their appropriate use
3. Prioritize hazardous driving behaviors (i.e., speeding and DUI) as the motivation for traffic enforcement and de-prioritize citations for non-hazardous and discretionary offenses (i.e., license and registration)
4. Support non-citation outcomes for non-hazardous violations, and restorative justice for minor traffic offenses, along with programs to reinstate drivers' licenses
5. Implement a training program for officers regarding traffic safety and implicit bias and hold officers accountable for instances or patterns of biased behavior



¹ A pretextual stop is where a motorist is pulled over for a minor traffic or equipment violation and then the stop is used to investigate more serious offenses.

Acronyms present in the following tables:

MO	Mayor's Office
DOT	Department of Transportation
TE	Traffic Engineering
CE	Engineering
FLT	Fleet
GM-MPO	Greater Madison Metropolitan Planning Organization
MPD	Madison Police Department
PH	Public Health Madison Dane County
DCR	Department of Civil Rights
AO	Attorney's Office
MC	Municipal Court
MMSD	Madison Metropolitan School District
Metro	Metro Transit
TC	Transportation Commission
TPPB	Transportation Policy and Planning Board
PL	Planning
CC	Common Council
ST	Streets

Safe Streets

The Safe Streets strategies and actions are people-centered and view human life and health as paramount. Changing the design and operation of Madison’s streets is key to eliminating fatal and serious crashes.

The actions will follow the Safe System approach, which is one that accommodates and compensates for the inevitability that humans will make mistakes while navigating our streets. It focuses on the primary known causes of traffic-related crashes to reduce serious injuries and fatalities by:

- Minimizing the level of unsafe user behavior; and
- Managing the speeds that injure people in a crash to the level that our bodies can tolerate without serious injury; and
- Making the transportation system more accommodating and “forgiving” of errors we make as humans.

The City will work to ensure that safety treatments serve the needs of people across many backgrounds and experiences, including people with disabilities, older adults, children and other vulnerable street users. The Safe Streets actions recognize that historical inequities exist that impact conditions today and acknowledge that the City must address these inequities to ensure safety improvements are equitable and just.

The City will plan transportation systems that protect the most vulnerable users and make slower, safe speeds the norm. Data will be key in understanding where changes will have the most impact as well as highlight what areas are underserved with improvements so that inequities can be addressed.

The work will be informed by other initiatives such as Complete Green Streets and provide an impetus for implementing actions from other plans such as the City’s bicycle, pedestrian and transit plans.

1. Create safer streets through speed reductions

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
1.1 Launch “20 is Plenty” program to reduce the default speed limit to 20mph	Underway	\$	2 neighborhoods	TE	TC
1.2 Expand “20 is Plenty” citywide	Year 1	\$\$	Citywide default speed limit lowered to 20 mph	TE	TC, CC
1.3 Analyze all HIN streets to determine appropriate speed limits and implement changes	Within 10 years	\$\$	10% of HIN per year	TE	TC
1.4 Use street reconstruction and repaving project as an opportunity to evaluate speed limits and geometric changes that foster lower speeds.	Underway	\$\$	Review of HIN & non-local streets during design process	TE	CE
1.5 Monitor and evaluate results of speed limit changes and recommend needed improvements based on results.	Underway	\$\$	Use Streetlight & other data for regular review	TE	CE, MPD
1.6 Increase the use of mobile & permanent speed feedback signs to discourage speeding.	Year 2	\$\$	Establish an efficient rotation for mobile speed boards on HIN streets.	TE	MPD

2. Make safety improvements systematically on High Injury Network streets

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
2.1	Use Vision Zero data to be proactive in street design that incorporates crash reduction measures	Underway	\$	Review all street projects & incorporate data during design & planning	CE, TE	PL
2.2	Use the Complete Green Streets to guide design of projects in the street right-of-way	Year 2		Complete Green Streets project completed in 2023	DOT – TE	CE, PL
2.3	Implement spot treatments such as higher visibility signals, hardened centerlines, green markings, protected left turns, traffic calming and other small improvements on HIN.	Underway	\$\$	Review all project locations for small improvements using crash, speed and other data to determine needed improvements	TE	CE
2.4	Do quick build projects that can be implemented until a permanent project is possible	Underway	\$	Continue Slow Streets Program	TE	CE
2.5	Prioritize installing pedestrian countdown signals on the HIN & making upgrades to signal hardware that allow easier implementation of safety improvements	Underway	\$\$	Review all projects on HIN for potential improvements; update 10% of locations without pedestrian countdown signals each year	TE	CE
2.6	Develop a policy for when APS pedestrian signals/ RRFBs are added without a written request	Year 5	\$	Create and adopt policy	TE	DCR, CE, Metro
2.7	Add RRFBs and other crossing improvements at non-signalized transit stops on HIN including during reconstruction	Underway	\$\$	Minimum five crossing upgrades per year	TE	Metro, CE
2.8	Prioritize Upgrading non-ADA compliant curb ramps along HIN streets	Underway	\$\$	Review existing ramps. Upgrade as standalone projects or during reconstruction	CE	TE, DCR
2.9	Consider use HAWK signals where warrants are not met for a signal	Underway	\$\$	Review high pedestrians and bike traffic locations as appropriate	TE	CE
2.10	Collaborate across departments to further safety strategies while also considering emergency access, development plans and more.	Underway		Maintain Vision Zero staff team & stakeholder task force meetings to implement Action Plan	MO	Citywide

3. Improve street lighting

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
3.1 Convert lighting to LED	Underway	\$\$\$	Complete conversion by 2025	TE	MGE
3.2 Enhance street lighting to improve visibility throughout the HIN	Underway	\$\$	Review all projects on HIN for improvements	TE	CE, MGE
3.3 Ensure high visibility lighting at BRT station crosswalks	Within 5 years	\$\$	Regular review of crossings as BRT implemented	TE	Metro
3.4 Ensure routine tree trimming near street lights	Within 5 years	\$\$	Policy adopted	TE	Streets
3.5 Improve lighting at shared-use path crossings and crosswalks on HIN	Underway	\$\$	Review street projects for lighting improvements & review crash data to prioritize improvements	TE	CE

4. Incorporate Vision Zero into project selection

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
4.1 Use Vision Zero and the HIN as a criteria in development of the Transportation Improvement Program	Within 5 years	\$	Approved process project selection	CE, DOT	TE TC, BPW
4.3 Implement new Safe Streets Madison program	Underway	\$	Process in place for 2022 project selection	TE	CE, TC

5. Close gaps in the pedestrian network and bicycle network

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
5.1 Prioritize closing gaps in the pedestrian and bicycle network along the HIN	Within 5 years	\$ - \$\$\$	Create a prioritized list of critical gaps	DOT - TE	CE TPPB
5.2 Increase mileage of protected bike lanes & protected intersections	Within 5 years	\$\$\$	Determine funding source for maintenance, install as funding allows	DOT - TE	CE, ST
5.3 Develop School Travel Plans to identify safety priorities near schools	Within 5 years	\$\$	All MMSD school travel plans updated by 2027	TE	MMSD, CE, BFW
5.4 Update Pedestrian Plan/ incorporate in CGS	Within 5 years	\$	Completed plan by 2025	DOT - TE	CE, PL, PH, METRO
5.5 Update Bicycle Plan/ incorporate in CGS	Within 5 years	\$	Updated plan by 2025	DOT-GM-MPO	TE, CE, PL

6. Secure increased funding for implementing Vision Zero strategies & for long-term maintenance of improvements

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
6.1 Increase dedicated project and staff funding for Vision Zero	Within 5 years	\$\$\$	Increases in project budget and staffing	CC, TE	CE TC, TPPB
6.2 Increase funding for maintenance of continental crosswalks, green markings, DFB, RRFBs, protected bike lanes and other safety improvements	Within 5 years	\$\$\$	Increases in operating budget	CC, TE	TC, TPPB MO, CC
6.3 Increased funding for seasonal maintenance of protected bike lanes, paths, sidewalks and transit stops	Within 5 years	\$\$	Increases in operating budget	CC, ST	TE, CE, TC, TPPB MO, CC
6.4 Continue to pursue federal & state funding for infrastructure safety improvements on HIN streets	Underway	\$	Increases in funding awards from state, federal & other sources	CE, TE	MO, CC

7. Advocate for changes to state statutes and increased funding that would improve the City's ability to advance the goals of Vision Zero

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
7.1 Advocate for the ability to conduct automated traffic enforcement.	Within 10 years	\$	State legislation passed	MO	TE, MPD
7.2 Advocate for funding to expand treatment court in support of operating while intoxicated (OWI), impaired driving reduction & other traffic violations	Within 5 years	\$\$	Increased funding for court / ticket alternatives	MC, AO	Community
7.3 Advocate for increased funding for pedestrian and bicycle improvements.	Underway & Monitoring	N/A	Fully funded federal programs	MO	TE
7.4 Advocate for reinstatement of the use of eminent domain for pedestrian and bicycle facilities.	Within 5 years	\$	State legislation changed	MO	DOT, CE, Community

Safe People

The people who live, work, study and visit Madison deserve safe streets. Madison has made significant investments in its streets and is recognized as a Platinum city for bicycling and a Gold city for walking. In 2018 Madison’s trip to work mode share was walking 10%, biking 5%, and transit 9%. Despite this high alternate mode share, fatal and serious crashes continue to rise. To meet the Vision Zero goal, transportation system improvements must provide safe mobility options that allow people to effortlessly live their lives using all modes.

Madison can learn from other cities who are seeing success with Vision Zero. In 2019, Oslo, Norway had zero fatalities involving people walking and biking and only one motor vehicle fatality. This multi-modal focus, along with the Safe Systems approach, has helped make Oslo a leader in safety. In 2015, Oslo’s mayor, city council and transport division staff all supported a shift in roadway decision-making from car-centric to people-centric and set a goal in 2015 to reduce car traffic by one third by 2030. As motor vehicle miles traveled (VMT) decrease, so can serious injury crashes.

Although much of the focus for Vision Zero will be on design and operation of our streets, education and outreach are criti-

cal to achieving safe streets and building the necessary foundation for change. Informing residents of transportation choices can reduce VMT. Education programs and community engagement will help shape the values that inform decision-making and raise awareness about why changes are necessary and how dangerous behaviors impact all roadway users.

Everyone must be included in creating a culture of traffic safety. This means that the City must educate our own staff across all departments to be leaders and advocates for traffic safety. We must also ensure that all residents and visitors have access to resources in multiple languages to eliminate barriers to important information. This work must be done in partnership with stakeholders from across the community.

Vision Zero must also work closely with vulnerable populations like the elderly who are more likely to suffer significant injuries in a crash. People with disabilities must be involved to ensure that changes improve mobility and do not adversely impact their safety and mobility. Children and youth, who are most impacted by safe walking and biking, will carry these ideas forward into the future and must not be left out of the Vision Zero initiative..

1. Expand and support alternatives to driving, reducing VMT

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
1.1 Implement policies that reduce VMT to decrease the total number of motor vehicles on the streets of Madison.	Underway	\$	Support Dane County goal of 15% VMT reduction by 2050	DOT	GMMPO, Dane County, Citywide
1.2 Implement a TDM Ordinance	Underway	\$	Approved during 2022	DOT	PL
1.3 Implement Bus Rapid Transit and the Metro Transit Network Redesign to increase convenience and accessibility	Underway	\$\$\$	Implementation 2024	DOT, Metro	Citywide
1.4 Build out a safe, comfortable network of bike routes for people of all ages and abilities to increase mode share.	Underway	\$\$\$	New & improved facilities, project priority list	DOT, TE	CE, PL
1.5 Address gaps in the walking network with a focus on improving accessibility for people of all ages and abilities to increase mode share.	Underway	\$\$\$	New & improved facilities, project priority list	CE	TE, PL, TC
1.6 Improve Park and Ride areas for better transit access & accessibility to paths, bikeshare & other amenities	Within 5 years	\$\$\$	New & improved facilities	DOT	TE, CE, Metro, PL

2. Build a traffic safety culture in Madison

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
2.1	Continue to improve the Vision Zero website, do press releases and share messages through city social media and other outlets	Underway	\$	Expand Vision Zero earned media & social media	MO, TE	Citywide, Community
2.2	Create a Vision Zero outreach campaign based on data such as common crash factors and locations. Include culturally relevant materials in multiple languages.	Within 5 years	\$\$	Annual campaign based on top factors, demographics	TE	MPD, PH, DCR, UW, Community
2.3	Create a Vision Zero communication campaign specifically around speed limit change to educate travelers about the connection between safety and speed and increase understanding of new speed limits.	Year Two	\$\$	Annual campaign based on data, community feedback	TE	MPD
2.4	Provide opportunities for survivors to share their personal stories	Within 5 years	\$	Survivor engagement	MO	TE, MPD
2.6	Work with the Municipal Court to support referrals to diversion classes such as the Pedestrian Safety Seminar & Victim Impact Panels	Underway	\$	Decrease in disparate outcomes; increased driver knowledge	MC	AO, TE, MPD
2.7	Support Dane County's Driver's License Program, Operation Fresh Start's Drive program & similar programs	Underway	\$	Expand Vision Zero messages in trainings	MO	TE, DCR
2.8	Work with programs/businesses that offer driver training to include Vision Zero information in their trainings and ensure that walking and biking safety are a part of the trainings. Offer Bicycle/Pedestrian Safe Driver classes to public.	Within 5 years	\$	Increased inclusion of Vision Zero information in trainings	DOT	TE
2.9	Use Wisconsin Alcohol Policy Project tools such as Place of Last Drink to combat DUI	Within 5 years	\$\$	Review of policies, data collection	MPD	PH
2.10	Increase support for programs that discourage impaired driving by offering free/low cost alternatives.	Within 5 years	\$\$	Increased use of options	CC, MO	Metro, MPD, PH

3. Expand Safe Routes programming and walk/bike/travel education and safety

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
3.1	Work with MMSD and community partners to institutionalize Safe Routes to School & increase staffing.	Underway	\$\$	Increase in programs & school participation	TE	MMSD, Community
3.2	Work with MMSD to update School Travel Safety Plans with an emphasis on increasing walk and biking and prioritizing safety. Partner with schools on educating parents/families on the School Travel Safety Plans and encouraging walking, biking, and transit.	Within 5 years	\$\$	All schools have up-to-date Travel Safety Plans & families are informed on plans	TE	MMSD, Community
3.3	Expand safe walking and bicycling education for students in elementary school and middle school.	Underway	\$\$	All schools offer walk/bike education within 10 years	TE	MMSD, Community
3.4	Offer mobility education to high school students that includes information on safe walking, biking, driving and taking transit.	Within 5 years	\$\$	All schools offer mobility education	TE, Metro	MMSD, Community
3.5	Expand safety initiatives such as the Be Bright at Night light giveaways that ensures all residents have access to required bike lights.	Ongoing	\$	New initiatives based on data/new partnerships	TE	MPD, PH, Community

4. Develop materials to educate and communicate to city staff and key stakeholders

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
4.1	Create a guide for Public Information Officers to guide communication around Vision Zero	Underway	\$	Educate all City PIOs	TE	Citywide
1.2	Modify guide for use by Vision Zero Stakeholder Task Force members when discussing VZ	Year One	\$	Increased partner communications	TE	Community
1.3	Use Vision Zero logo on construction project signs, bumper stickers on city vehicles, helmets, etc.	Year Two	\$	Increased usage of logo	TE	CE, FLT
1.4	Develop a guide and presentation for departments to understand Vision Zero & how to incorporate into their work to reach goals.	Year Two	\$	Train City staff to be Vision Zero advocates	TE	Citywide

Safe Vehicles

Safe vehicles strategies aim to assist drivers with emerging technologies. These technologies range from alerts, to triggering actions, to driver behavior, to automated driving features.

There are different technologies available for installation on vehicles. Some technologies like anti-lock braking system (ABS), lane departure alert, and backup cameras can be obtained directly from the manufacturer. Other technologies do not come standard from the manufacturer and require us to reach out to different vendors. These technologies usually require a pilot, and coordination to retrofit

our vehicles. Furthermore, some technologies can be leveraged to assess driver behavior.

1. Encourage and promote vehicle safety technologies when purchasing fleet vehicles

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
1.1	All sedans, pickups, and vans that the City purchases will include backup cameras and ABS.	Underway	\$	All City vehicles will have the minimum technologies to assist drivers.	Fleet	
1.2	Where available, the City will purchase vehicles with lane departure alerts, adaptive cruise control, automatic emergency braking, side cameras, and other, newly available technologies.	Underway	\$\$		Fleet	
1.3	The City will pilot the different technologies available as long as they are cost efficient and/or will greatly benefit the City, employees, and residents.	Underway	\$\$	Have the right tools to minimize human error while operating City vehicles.	Fleet	

If the pilot is successful and there is a return on investment, the City will try to purchase the technology.

1.4	The City will continue to install telematics devices on all Public Works vehicles.	Underway	\$	Create a telematics program that allows for driver coaching.	Fleet	Geotab
1.5	Speeding, harsh braking, hard acceleration, seatbelt usage, and idling will be monitored by participating departments.	Underway	-	Monthly reporting will be used	Fleet	Public Works
1.6	Geographical trends will be used to further identify opportunities to invest time in design, enforcement, and education.	Underway	-	As more data is reviewed from our vehicles, trends will stand out which will help us focus our efforts more efficiently.	Fleet	Public Works, TE, MPD
1.7	A database of collision costs involving City vehicles including insurance claims, worker's compensation, and auto body repair will be centrally tracked and reported on.	Underway	-	Better understand the budget impact of collisions and how such costs can be mitigated.	Fleet	Risk Management

2. Train drivers to make the best decisions available to them using defensive driving strategies

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
2.1	All City staff will attend a defensive driver training in the next few years.	Year Two	\$	All City employees will have an understanding of defensive driving and practice its methodology when driving.	Fleet	Citywide
2.2	The City will review driver behavior by department and identify risky drivers.	Underway	-		Fleet	Public Works
2.3	Drivers deemed risky will need to attend a mandatory training session.	Underway	\$	Focused training will be available to drivers' who engage on risky behaviors.	Fleet	Citywide
2.4	City Vehicle Driver rules updated to place more focus on safety (APM 2-13).	Year One	-		Fleet	Citywide
2.5	"How's My Driving?" bumper stickers being drafted and placed on all vehicles by the summer of 2021.	Underway	\$	Have a centralized line where residents can call to report drivers involved in risky behaviors.	Fleet	Citywide
2.6	Safe Driver Award to recognize City drivers.	Underway	\$		Fleet	Citywide

Safety Data

Vision Zero is a data-driven approach, and gathering, analyzing, utilizing, and sharing both formal data on injury crashes and community input to understand traffic safety priorities is fundamental to Vision Zero success. This starts with collecting transportation safety data that reflects the basic factors in serious crashes: What happened? When? Where? Why? Involving whom?

However, the Vision Zero work should not be just reactive, Data must also be used to proactively prioritizes safety interventions by analyzing locations with repeated problems and observing the characteristics of those crashes and sites, then applying that to sites throughout the city, even where serious crashes may not have happened yet. Vision Zero recognizes this as an emerging trend and will work closely with the TOPS Lab at UW-Madison to improve the City’s use of predictive modeling. This will allow for more forward-facing identification of problem areas and focus on preventing streets from becoming high injury locations.

Data is also critical in prioritizing funding, staffing resources and programmatic efforts. Understanding which locations and which behaviors lead to the most serious injury crashes is vital in making smart investments that will help reach the goal of zero deaths and serious fatalities by 2030. Data analysis and public input will be used to increase allocation of resources to communities that have historically been underserved and target current disparities in safety and mobility in our community.

Collecting, analyzing and using the right data will require a high level of coordination between different City agencies and partners. Data will impact the ongoing evolution of Madison’s Vision Zero program and will be used to gauge impact over time. Safety Data strategies and actions support the data-driven approach to Vision Zero as well as ensuring accountability for progress towards goals.

1. Improve City data, transparency, and communication

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
1.1	Work with Public Health to incorporate emergency room data into Vision Zero data	Year 2-3	\$	Continuous improvement of data	TE	PH
1.2	Track Vision Zero Action Plan implementation & share annual report	Year 1	\$	Establish annual report	TE	Citywide
1.3	Maintain the Vision Zero website with updated crash data, annual report and other progress information	Underway	\$	Regular website updates	MO, TE	CE, FLEET, MPD, PH

2. Use data to equitably direct funding, resources and eliminate crash disparities

	Action Item	Timeline	Cost	Goal	Lead Agency	Partners
2.1	Conduct studies to measure effectiveness of Vision Zero treatments	Underway	\$	Conduct evaluations each year	DOT - TE	CE, MPD
2.2	Analyze Vision Zero investments using an equity framework	Underway	\$	Increase projects in historically underserved communities	DOT	Citywide
2.3	Further analyze data on racial disparities in serious & fatal crashes	Year 1-2	\$	Develop strategies to eliminate disparities	TE	CE, PH, GMMPO
2.4	Leverage engagement across agencies & projects to improve outcomes.	Year 1-2	\$	Improved engagement & project outcomes	TE, CE, DCR	Citywide

2.5	Monitor and evaluate results of speed limit changes and recommend needed improvements based on results.	Underway	\$\$	Conduct annual review of sample locations	TE	CE, MPD
2.6	Work with UW TOPS Lab to create a predictive High Injury Network framework	Year 1	\$	Improved HIN model	TE	CE



Safety Focused Enforcement

The City of Madison should strive to achieve Vision Zero objectives with minimal traffic enforcement. This will require deliberate road design decisions and coordinated efforts to create a culture of safe driving.

In the near term, there are important steps that the City should take through its existing traffic enforcement programs – the Traffic Enforcement and Safety Team (TEST), traffic enforcement grants from WisDOT’s Bureau of Transportation Safety (BOTS), and patrol-based enforcement – to support the goals of Vision Zero.

Research suggest that knowing and quantifying the impacts of traffic enforcement on safety is surprisingly complicated. In general, however, effective traffic enforcement should be part of proactive efforts targeting the most dangerous behavior and paired with physical road changes and public awareness strategies. Traffic enforcement must be deliberately coordinated with other Vision Zero initiatives and data must continue to be collected to better understand the effectiveness of different traffic enforcement activities.

Based on the available data, there appear to be several critical issues in Madison for which traffic enforcement could play an important role. These offenses, which put drivers and other road users at risk, include:

- Driving while impaired or intoxicated.
- Speeding or driving too fast for conditions
- Failure to yield

There are other traffic safety issues that MPD could actively enforce, but should not be a high priority. These offenses are less likely to put other road users at great risk, they are more prone to biased enforcement and they can be addressed through other countermeasures. The include:

- Failure to wear a seat belt
- Bicycle and pedestrian infractions

Other non-hazardous violations, such as license and registration violations, are not expected to improve traffic safety and do not fit within the Vision Zero framework. Citations for these offenses also exacerbate racial disparities. Madison Police Department should continue taking steps to de-prioritize these types of citations.

1. Coordinate engineering, education, and enforcement activities so that MPD can focus traffic enforcement at times and locations to have the greatest impact on reducing unsafe driving and serious crashes

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
1.1 Identify priority times and locations for traffic enforcement and establish enforcement benchmarks to include in quarterly reports.	Year 1	\$	HIN & crash factor data used for traffic enforcement	MPD	TE
1.2 Establish a formal interdepartmental team and leverage existing collaborations to coordinate engineering, education, and enforcement, as they relate to Vision Zero. This effort should amplify traffic enforcement activities through media, community, and stakeholder engagement to maximize its impact.	Underway	\$	Collaboration across departments	MPD	City-wide

2. Limit the use of pretextual traffic stops¹ and implement clear guidance on their appropriate use

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
2.1 Develop standard operating procedures (SOPs) identifying criteria for pretextual stops (e.g., reasonable suspicion of criminal activity).	Year 1	\$	Reduce or eliminate pretextual stops	MPD	
2.2 Require documentation of pretextual stops in official police reports and data collection; include in the annual report beginning 2023.	Year 1			MPD	

3. Prioritize hazardous driving behaviors (i.e., speeding and DUI) as the motivation for traffic enforcement and de-prioritize citations for non-hazardous and discretionary offenses (i.e., license and registration)

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
3.1 Hazardous violations should account for 75% of citations by 2023 and 80% of citations by 2025.	Within 5 years	\$	Increase in % of citations for hazardous	MPD	
3.2 Develop guidance for the handling of non-hazardous violations	Year 1	\$	Reduce or eliminate use of non-hazardous violations as the primary basis for traffic stops	MPD	

4. Support non-citation outcomes for non-hazardous violations, and restorative justice for minor traffic offenses, along with programs to reinstate drivers' licenses.

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
4.1 Provide department-wide guidance for expectations regarding non-citation outcomes for non-hazardous citations, including programs to assist in obtaining or reinstating driver's licenses.	Year 1-3	\$	Significantly reduce on-hazardous citation outcomes	MPD	
4.2 Limit the use of license suspension and revocation to cases with repeated hazardous violations	Year 1–2	\$	Focus on strategic use of non-hazardous violations for dangerous drivers	MPD	
4.3 Identify and support key programs and stakeholders to significantly reduce racial disparities in driver's license status.	Year 2-3	\$\$	Dramatically improve the percentage of valid license for driving age POC	MPD	City-wide

5. Implement a training program for officers regarding traffic safety and implicit bias and hold officers accountable for instances or patterns of biased behavior

Action Item	Timeline	Cost	Goal	Lead Agency	Partners
5.1 Develop curriculum to be presented at MPD's pre-service academy related to racial disparities in traffic enforcement and panel discussion on DWB in Madison.	Underway	\$	Support MPD action items and improve knowledge and awareness	MPD	

¹ A pretextual stop is where a motorist is pulled over for a minor traffic or equipment violation and then the stop is used to investigate more serious offences.

5.2 Develop curriculum to be presented at MPD's in-service training related to racial disparities in traffic enforcement and panel discussion on DWB in Madison.

MPD

5.3 Develop curriculum to be presented annually at an MPD's Supervisor Check-In related to effectively monitoring, coaching and documenting officers traffic enforcement outcomes.

MPD



IMPLEMENTATION & ACCOUNTABILITY

Taking Action



www.cityofmadison.com/visionzero

Safety Starts with All of Us

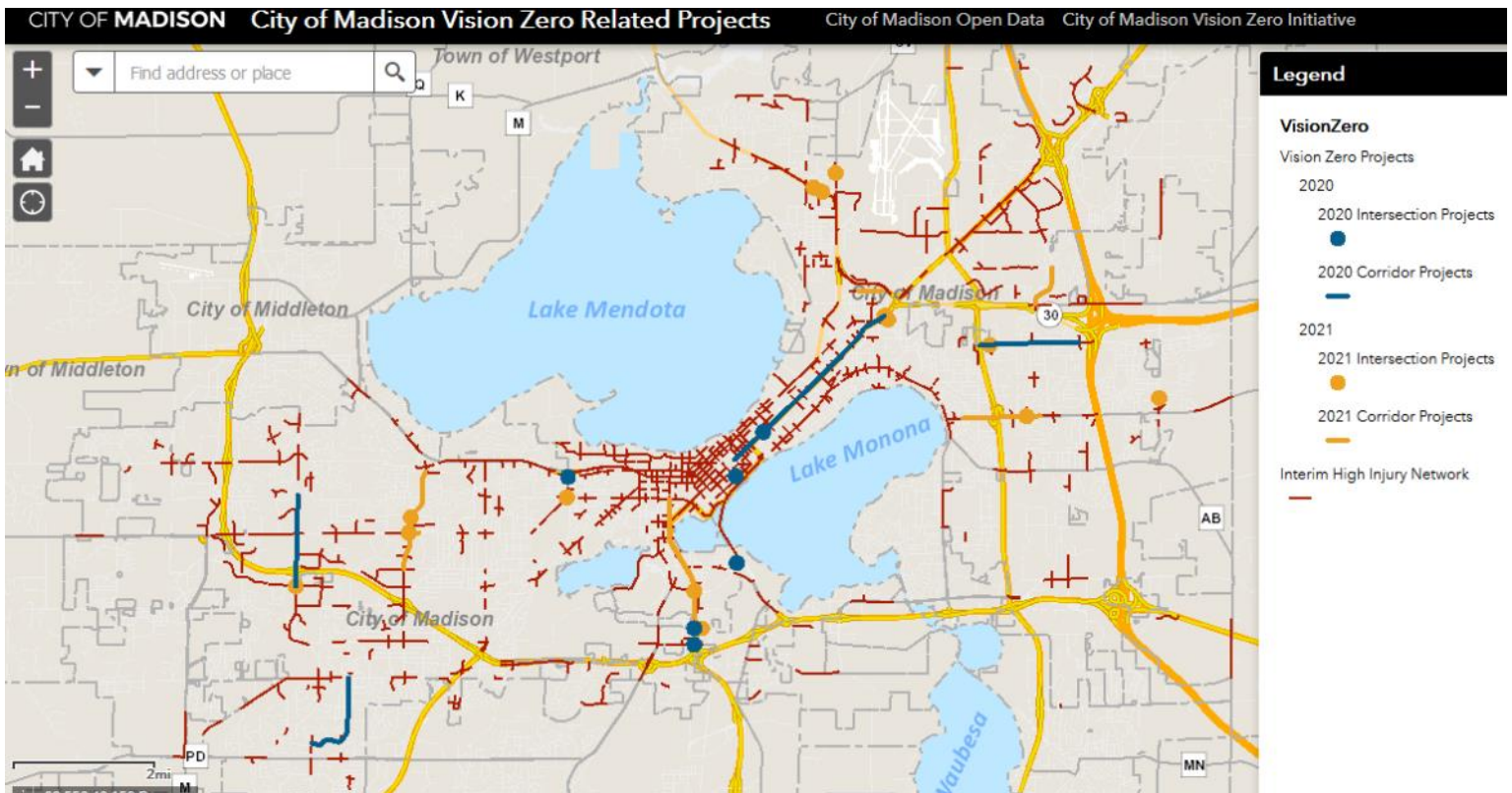
In addition to working on this Action Plan, City staff across multiple departments have already begun the process of increasing safety on Madison streets.

2020 & 2021 Vision Zero Projects

Since committing to the Vision Zero approach to traffic safety, Madison has completed a number of infrastructure safety projects. These projects, which were selected because of their low cost, quick im-

plementation, and high efficacy, focus on reducing crash severity by lowering speed limits and prioritizing pedestrian and bicycle safety by increasing visibility and yield compliance.

A public information campaign started with a launch event in June 2020 and the launch of the “Safety Starts with All of Us” bus ads. Since then media coverage has been robust of Vision Zero.



Taking Action

The Vision Zero Action Plan is a commitment along with an initial set of strategies and actions to reach the vision of zero fatal and serious injuries on Madison's streets. However, Vision Zero must be more than a static plan and it must be discussed and reinforced every day. This Plan must be a living document that unites people across departments, across organizations and across the city to prioritize safety.

City Commitment

A City Staff Steering Team was established in 2020 at the direction of Mayor Rhodes-Conway and was tasked with implementing Vision Zero. This team is critical to the success of Vision Zero moving forward.

The City Steering team includes:

- Mayor's Office
- Madison Department of Transportation
- Traffic Engineering
- Engineering
- Fleet Services
- Metro Transit
- Public Health Madison & Dane County
- Finance
- Neighborhood Resource Teams
- Madison Police Department

The Vision Zero Network suggests the creation of sub-committees or work groups to further cross-departmental work, delve deeper into the issues, and get action on the issues. Madison has established work groups for each of the strategy areas—Safe Streets, Safe People, Safe Vehicles, Safety Data and Safety Focused Enforcement.

The Transportation Policy & Planning Board has been tasked with review of the Vision Zero program and will continue to receive updates (bi-annually). The updates will include review of the goals from the Action Plan Strategies & Actions along with the Annual Report. The Transportation Policy & Planning Board will also review future updates to the Action Plan. The Transportation Commission will review and approve Vision Zero infrastructure projects through the Safe Streets Madison program along with other reconstruction and resurfacing project review.

A Stakeholder Task Force comprised of around 50 local partner agencies and organizations began meeting quarterly in

2020 and continues to provide valuable feedback and support for Vision Zero. They will continue to be a key to implementing the Action Plan Strategies.

Ongoing Actions

Transportation Improvement Program & the High Injury Network

The Transportation Improvement Program outlines the City's planned street and path projects over the next six years. Since the City began preparing to launch the Vision Zero initiative in 2019, 11 roads with segments on the High Injury Network have been reconstructed or resurfaced with safety improvements. In the current Transportation Improvement Program, 9 additional high injury network streets are programmed for a reconstruction or resurfacing project. Additional recent or upcoming projects include 5 significant bicycle and pedestrian paths or path extensions which provide a safe and convenient off-street option.

Safe Streets Madison

Safe Streets Madison focuses on two key priorities: 1) implementing traffic safety measures in a fair and equitable manner to eliminate traffic deaths and serious injuries on City streets, using data from the HIN to determine where safety improvements should be made; and 2) improving connectivity by closing gaps in the City's pedestrian and bicycle networks in a fair and equitable manner and to ensure that it is accessible for all ages and abilities.

This new program includes funding targeted to Vision Zero as well as the former Neighborhood Traffic Management Program and the Pedestrian Bicycle Enhancement Program. Since 2019 these programs have included over 50 improvements on the High Injury Network. With the newly created Safe Streets Madison program, the funding will accelerate projects focused on meeting the goals of Vision Zero.

Twenty is Plenty

The Twenty is Plenty program aims to reduce speeds on neighborhood streets—a major determinate of crash injury, and create a safety culture where streets are viewed as a community resource. Other cities that have implemented "Twenty is Plenty" programs have seen reductions in crash injuries.

Systematic Speed Reductions

Historically engineers relied on the 85th percentile standard to set speed limits. This policy emerged as early as the 1940s and is based on the assumption that the majority of

drivers can operate at reasonable speeds according to weather conditions, traffic, road geometry, and other factors. Yet, this viewpoint means that drivers set the speed limit.

However, current research indicates that using the 85th percentile speed to set speed limits may have unintended consequences, and more specifically, that raising the speed limit to match the 85th percentile speed may lead to higher operating speeds, and hence a higher 85th percentile speed and more dangerous speeds. The National Transportation Safety Board recommends revising traditional speed-setting standards to balance with the safe systems approach to incorporate other critical factors, such as crash history, street context and the safety of people walking and bicycling.

Since 2019 the City has evaluated over 10 miles of non-residential streets to determine a safe and appropriate speed. A recent speed reduction project on East Washington reduced the amount of traffic traveling over 40 mph (a speed where 73% of crashes result in a severe injury), from 8% to just 1%.

Federal and State Funding Opportunities

Not all of the improvements needed to meet the Vision Zero goals will be funded through the City budget. Federal and

state transportation funding opportunities include program such as:

- Highway Safety Improvement Program
- Surface Transportation Program
- Transportation Alternatives Program
- Public traffic safety grants

The City of Madison will aggressively pursue these outside funding sources. A number of projects have already been awarded including:

- HSIP—Gammon Road & Watts Road Intersection Improvements, Mineral Point Rd & Gammon Intersection Improvements
- TAP—West Towne Path Extension, West Main Street Bike Boulevard Improvements
- STP— Atwood Ave from S Fair Oaks Ave to Cottage Grove Rd, John Nolen Drive from Lakeside St to North Shore Dr., University Ave from Shorewood Blvd to King St, S Blair St at John Nolen Dr.
- Public traffic safety grants—Hazardous violation traffic enforcement

Complete Green Streets & Vision Zero

Complete Streets are for everyone, no matter who they are or how they travel. There is no one design of a Complete Street but instead each street considers the specific context of the community, neighborhood and street. A complete street is designed and operated in a way that prioritizes safety, comfort and access to destinations for all people who use the street.

Green streets are part of healthy, equitable urban design that views streets as vital public spaces. Incorporating green elements in to streets improves mental and physical health through better air quality, valuable shade and beautification and contact with nature in areas where access to parks is limited. Green infrastructure is also part of designing for resilience and is critical for climate change mitigation and adaptation.

While safety is paramount, Complete Street projects also support important strategies, such as improving transit service and mobility, increasing urban environmental sustainability, and ensuring accessibility for all users. Context is key, and Complete Streets looks carefully at how the built environment and the public realm interact to create vibrant streets that are safe for everyone.

A city with both a Complete Streets policy and a Vision Zero plan is well-positioned to dramatically shift its transportation planning approach away from motor vehicle efficiency and towards safety, accessibility and sustainability. A combined strategy can aggressively address unsafe road conditions, while also creating streets that are compelling places that support people making sustainable transportation choices.



Annual Report—Measuring and Reporting Progress

Evaluation and regular reporting are essential for the data-driven approach to Vision Zero. There must be accountability to the commitment of eliminating traffic deaths and severe injuries.

The City will issue an annual Vision Zero report to provide the public with an update on progress. Some metrics will be reported annually while others will be updated as resources allow depending on the complexity of the data.

Performance Metrics

- Safe Streets
 - Yearly mileage of speed limit reductions
 - Efficacy of speed limit reductions
 - Number of pedestrian and bike gaps closed per year
 - Yearly length of protected bike facilities
 - Yearly length of reconstruction, resurfacing or stand-alone major projects on HIN
 - % completion of LED upgrade
 - Discussion of smaller improvements on HIN
- Safe People
 - % VMT reduction, yearly basis
 - Total public information campaigns
 - Safe Routes to School and walk/bike education programming held
- Safe Vehicles
 - % of City Fleet with safety features.
 - % of City drivers trained
- Safety Data
 - Annually fatal and serious crashes
 - Including breakdown by mode, age, race and if located in RESJI area
 - Correlation with HIN and annual revision of HIN
- Equity
 - Yearly mileage of RESJI streets with TIP projects
 - Yearly mileage of RESJI streets with speed reductions
 - Ratio of small improvements on RESJI streets (RRFBs, DFBs, continental crosswalks, traffic calming, etc.)
- Safety Focused Enforcement
 - Hazardous Citation, Non-Hazardous Citations and Warning rates





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